No. 5.— *Birds from Northwest Yunnan*

By James C. Greenway, Jr.

Dr. Joseph F. Rock returned to the United States for a short visit after having made his fine collections for the United States National Museum. He returned to China to collect for the Museum of Comparative Zoölogy. This is a report of the birds that have been sent to the Museum by him in the years 1931 and 1932.

Upon his arrival at Yunnan-fu, capital of the westernmost province of China, in August, he found that the provincial government had long been at war with the neighboring province of Kwang-tung, that three thousand men had been sent to the war, and that in consequence the country had been left to the mercy of bandits. For this reason it was considered unsafe to proceed up country and a long delay followed. So it was not until January that he was able to lead his caravan of thirty-five mules over the long but to him familiar trail to the northwest.

In about three weeks the expedition arrived at Likiang, seat of the district government, but they found that the Nah-si population were in the process of celebrating the festival of muan-mo (propitiation of heaven) and would do no work. After more delay the caravan with a guard of a few ill-armed soldiers, trailed off to the northwest, into the valley of the Mekong and later northward into the valley of the Salween and the headwaters of the Irrawaddy.

The expedition was divided, and real collecting began in April and continued until March of the next year. I have listed the localities where Rock collected together with the meager information that he has furnished.

A-dshwa, eastern slopes of the Likiang Snow Range, 14,500 ft., crags and cliffs, May, 1931.

Champutong, border of Tibet and Yunnan, Salween Valley, eastern slopes of the Salween-Irrawaddy Divide, 9,000 to 10,000 ft., July.

Chou-yu-gko, above Tao-mung-chung, Likiang District, 13,000 to 15,000 ft., eastern slopes of the Yangtze-Mekong Divide, fir and rhododendron forest, April, 1931.

Gomba-la, Mt. (Kenichunpo), eastern slopes of the Salween-Irrawaddy Divide, 14,000 to 16,000 ft., alpine meadows and rocky crags and also fir and rhododendron forest, July, 1931.

Gyi-na-loko, Mt., Likiang Snow Range, 10,000 to 15,000 ft., October or November, 1931.

Haba-ndsher-nvulu Snow Range, northwest of the Yangtze big bend, above 14,000 ft., fir and spruce forests with Arundinaria undergrowth, January, 1932.

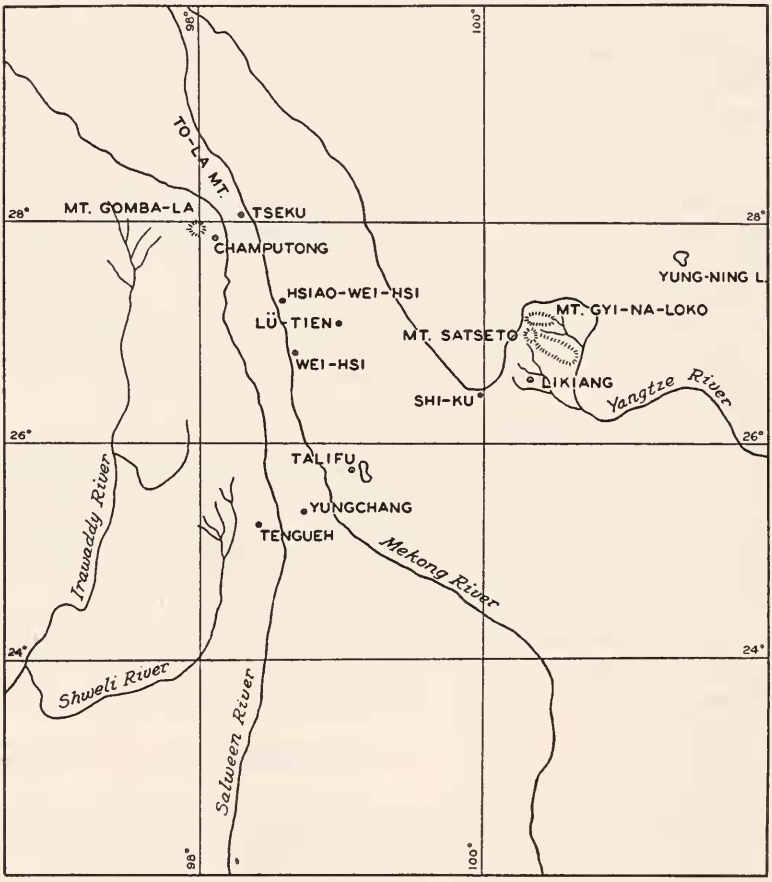

Fig. 1

Hsiao-Wei-hsi, north of Wei-hsi, banks of the Mekong River, September, 1931.

Kenichunpo, Mt. (see Mt. Gomba-la).

La-shi-pa, west of Likiang, rice fields, September, 1931.

Na-dza-gko, alpine meadow of, slopes of Mt. Satseto.

Nv-lu-ko, foot of the Likiang Snow Range, 9,500 ft., July, 1931.

Satseto, Mt., east slopes of the Likiang Snow Range, 12,000 to 15,000 ft., limestone formation; spruce and fir forests mixed with Acer, Syringa, Euonymus, Arundinaria, October and November, 1931.

Shi-ku, banks of the Yangtze River, 6,200 ft., willow and poplar groves, March, 1931.

Shwe-men-kan, Mt., Haba-ndsher-nvulu Snow Range.

Su-wa-tong, Tibet, 14,000 to 16,000 ft., upper slopes of Mt. Gombala or Kenichunpo, July, 1931.

Tao-mung-chung, southwest of Lu-tien (Li-tien), Likiang District, 10,000 to 12,000 ft., southern slopes of the Yangtze-Mekong Watershed (Li-ti-ping), spruce and fir forests, April and May, 1931.

Tse-chung, Mts., Mekong Valley, eastern slopes of the Mekong-Salween Divide, 8,000 to 11,000 ft., forests, August and September.

Tung-la, Mts. (To-la in Tibetan), above Ho-fu-ping, western slopes of the Yangtze-Mekong Divide (Pe-ma-shan), 12,000 to 14,000 ft., fir and rhododendron forests, August, 1931.

Wei-hsi, west of, 9,000 ft., pine forests, June, 1931.

Wei-hsi, Mts., west of, east of the Mekong River, 10,000 to 11,000 ft., spruce and hemlock forests with canebrake undergrowth, June, 1931.

Wei-hsi, banks of the Wei-hsi River, 7,000 ft., June, 1931.

Yun-nan-yi, plain of, east of Talifu, 5,000 ft., February, 1931.

Yung-ning, Lake, two days northeast of the Yangtze big bend, spruce forests with canebrake undergrowth, 10,000 ft., February, 1932.

The collection contains over 1,800 skins, comprising 216 forms. It is a well made collection, without overburdening series of common things and with its share of rarities. *Chalcites xanthorhynchus* has been added to the Yunnan list and three forms have been described. They are *Erythrina edwardsii rubicunda*, *Erythrina vinacea rubidior* and *Ithaginis cruentus holoptilus*.

Thanks are due to the United States National Museum for the loan of needed material and to Joseph H. Riley, N. B. Kinnear of the British Museum of Natural History and B. Stegmann of the Academy of Science, Leningrad, for advice.

It would be impossible adequately to thank Outram Bangs and James L. Peters. Since the report was done under their constant kindly supervision, their work merges subtly into mine, so that it would be impossible to say where one began and the other ended. During the period in which the collection was being identified Outram

Bangs died. I cannot express the value of his influence and help not only to this little paper but also to my education.

Phasianus colchicus elegans Elliot

Ann. Mag. Nat. Hist., **6**, 1870, p. 312 (Yung-ling Mountains, W. Sechuan).

A single male was taken on the slopes of Mt. Gyi-na-loko in April; three males at Tao-mung-chung in April or May and a female from the mountains of Tung-la (To-la) in August.

Chrysolophus amherstiae (Leadbeater)

Phasianus amherstiae Leadb., Trans. Linn. Soc. London, **16**, 1828, p. 129, pl. 15 (Mountains of Cochin China).

Five mature males, two immature and two females were taken at Tao-mung-chung in April or May; an immature male at Mt. Satseto in December; a female at Mt. Gyi-na-loko in October or November, and another female at an unnamed locality in the Likiang Range in March, and two males at A-dshwa in May.

Pucrasia meyeri Madrasz

Ibis, 1886, p. 145 (Central Tibet).

Single males come from Tao-mung-chung (April or May), Mt. Gyi-na-loko (October or November), and three males and a female from the Likiang Snow Range (February).

Tetraophasis szechenyii Madrasz

Zeitschr. Ges. Orn., **2**, 1885, p. 50, pl. 2 (East Tibet).

Four males and six females were taken on the Likiang Snow Range in February and three males and a single female at Mt. Gyi-na-loko on the Likiang Range in October or November.

Crossoptilon crossoptilon (Hodgson)

Phasianus crossoptilon Hodgson, Journ. Asiat. Soc. Bengal, **7**, 1838, p. 864, pl. 46 (Tibet).

A male and three females were taken at Mt. Satseto in February.

Verreaux mentions three characters to distinguish his *drouynii* (*tibetanus*). They are (1) grayish-white remiges instead of brown, (2) outer rectrices which lack white spots and (3) the median rectrices narrower and without the green-gold tinge.

In a series of three pairs taken by Zappey in southwest Sechuan in July and August the primaries are distinctly brownish while those of our present series are grayish. In males of both series the white outer webs of the outer primaries are apparent. I conclude that the primaries of summer birds are faded to brown and that the white on the outer primaries is a variable sex character.

I have not seen any specimens from central Tibet so that I cannot tell about the relative amount of white on the outer rectrices nor the relative width of the middle feathers. In the series of the Museum of Comparative Zoölogy a single male from Sechuan has the outer tail feathers edged with gray as has the single male from the Likiang Range, Yunnan. In view of these facts it would seem doubtful that *drouynii* is a tenable form.

Tragopan temminckı (Gray)

Satyra temmincki Gray, in Hardwicke's Ill. Ind. Zoöl., **1**, 1830–32, pl. 1 (China).

Rock sent a single mature male from Shwe-men-kan (January); two females from Mt. Gyi-na-loko, one taken in November and the other in April; an immature male and two females from Mt. Satseto (December), and an immature male and two females from Chou-yu-gko (April).

Ithaginis cruentus kuseri Beebe

Zoölogica, **1**, 1912, p. 190 (Yunnan).

A single male specimen was taken at Mt. Gomba-la or Kenichunpo in southeast Tibet, elevation 14,000 to 16,000 ft., in June.

Ithaginis cruentus holoptilus subsp. nov.

Type.—No. 160,786 Museum of Comparative Zoölogy from Chou-yu-gko, above Tao-mung-chung, Likiang District; east slopes of the Yangtze-Mekong Divide, 13,000 to 15,000 ft., collected in April, 1931.

Characters. Intermediate between *Ithaginis c. kuseri* Beebe and *Ithaginis c. rocki* Riley. On comparison with *rocki* the lores will be found to be black and red instead of black, and the same difference will be found in the line above the eye; the sides of the neck are white narrowly edged with gray rather than gray with narrow white shaft lines; sides of the upper breast are red and green rather than red mixed with buffy, or buffy. The chief character upon which I have separated this subspecies is the texture of the feathers of the crest, which are normal rather than decomposed as in *clarkei*, *rocki* and *kuseri*.

Rock has sent three males and three specimens sexed as females. I think, however, that two of these are immature males since they have red feathers appearing on the neck and breast; all of these were taken at Chou-yu-gko, Likiang District.

The range of these subspecies is, of course, very imperfectly known. As far as is known, however, this new form has an intermediate range. *Kuseri*, according to Rothschild, has been taken from Tseku, where its range borders on that of *rocki*, the Salween Valley, Tengueh and the Shweli-Salween Divide; *rocki* to the north in the mountains of Ho-fu-ping, and *clarkei* in the Likiang Mountains to the westward.

As well as a single specimen of *Ithaginis c. clarkei* Roths., taken at the Likiang mountains in May, I have examined two males and a female of *clarkei* from the same locality, kindly loaned by the United States National Museum, as well as two males and a female of *Ithaginis c. rocki* from the Ho-fu-ping mountains.

Ithaginis cruentus clarkei Rothschild

Bull. B. O. C., **40**, 1920, p. 67 (Likiang Range, Yunnan).

Ten males were taken at Mt. Satseto in January and February and one at Gyi-na-loko in October or November, two from Shwe-men-kan (January) and one at A-dshwa in May. Six females come from Mt. Satseto (January or February), one from Mt. Gyi-na-loko (October or November) and one from Shwe-men-kan (January).

Amaurornis fuscus erythrothorax (Temminck & Schlegel)

Gallinula erythrothorax T. & S., Siebold's Faun. Jap., Aves, 1849, p. 121 (Japan).

Seven males, six females and one unsexed specimen were taken on the banks of the Wei-hsi River in June.

Males measure wing: 98–107 and females 106–108.

Sphenocercus sphenurus yunnanensis La Touche

Bull. B. O. C., **42**, 1921, p. 13 (Lotukow, Yunnan).

Four males come from the mountains of Tung-la (To-la) (August).

Columba leuconota gradaria Hartert

Novit. Zoöl., **23**, 1916, p. 85 (Szetchuan).

Rock has sent a single specimen without data.

	CLARKEI	KUSERI	HOLOPTILUS	ROCKI
Lores	Black	Black and Red	Black and Red	Black
Above the eye	Black	Black	Black and Red	Black
Ear coverts	Very long, decomposed feathers; white shaft lines often tinged with red and black at base	Black	Long decomposed feathers; white shaft lines sometimes tinged with red and buff; black edges	Long (shorter than in *clarkei*) decomposed feathers; white shaft lines, edged with black
Crest	Very long; feathers decomposed	Short; feathers decomposed	Short; normal feathers	Short; decomposed feathers
Sides of neck	Gray with buffy shaft lines	Black	White, narrowly edged with gray	Gray with white shaft lines
Sides of upper breast	Gray with buffy shaft lines	Black	Red and green	Red mixed with buffy or buffy
Wing	♂ 202–214 ♀ 185–208	♂ 195	♂ 202–206 ♀ 196	♂ 196–199 ♀ 183

Streptopelia orientalis orientalis (Latham)

Columba orientalis Latham, Ind. Orn., **2**, 1790, p. 606 (China).

Two males and a female come from Tao-mung-chung (April or May), a single male from west of Wei-hsi (June) and a male without data.

Eulabeia indica (Latham)

Anas indica Latham, Ind. Orn., **2**, 1790, p. 839 (India in winter and Tibet).
Anser indicus, Stuart Baker, Faun. Brit. Ind., ed. 2, **4**, 1929, p. 405.

A female and an unsexed specimen were shot on the plain of Yunnan-yi, east of Talifu in February.

Ardea cinerea jouyi Clark

Proc. U. S. Nat. Mus., **32**, 1907, p. 468 (Seoul, Corea).

One female was taken at La-shi-pa, west of Likiang in rice fields in September. This is clearly a white necked form although the skin is in rather poor condition.

Bulbulcus ibis coromandus (Boddaert)

Cancroma coromanda Boddaert, Tabl. Pl. Enl., 1783, p. 54 (Coromandel).

A male in breeding plumage comes from Tao-mung-chung in April or May.

Milvus lineatus (Gray)

Haliaëtus lineatus Gray, Ill. Ind. Zoöl., **1**, 1832, p. 1, pl. 18 (China).

One unsexed specimen, a female, comes from the Likiang Snow Range (February).

Accipiter virgatus affinis Hodgson

Bengal Sport. Mag., New Ser., **8**, 1836, p. 179 (Nepal).

Rock has sent what by its very dark coloration appears to be an immature female from the Likiang Snow Range (April).

Buteo burmanicus burmanicus Hume

Stray Feath., **3**, 1875, p. 30 (Thayetmyo, Burma).

Two males come from the Likiang Snow Range (eastern slopes) and were taken in February.

Spizaetus nipalensis nipalensis (Hodgson)

Nizaëtus nipalensis Hodgson, Journ. Asiat. Soc. Bengal, **5**, 1836, p. 229, pl. 7 (Nepal).

A single specimen sexed as a female was taken at Mt. Gyi-na-loko in April. The wing measures 455 mm. It is an immature bird.

Aquila nipalensis nipalensis Hodgson

Asiat. Researches, **18**, pt. 2, 1833, p. 13, pl. 1 (Nepal).

One female comes from the foot of the Likiang Snow Range, 9,400 ft. (March).

Falco tinnunculus japonensis Ticehurst

Bull. B. O. C., **50**, 1929, p. 10.

Falco tinnunculus japonicus Temminck and Schlegel, in Siebold's Faun. Jap., Aves, 1844, p. 2, pl. 1 (Japan). [Name preoccupied.]

An immature male and female come from Mt. Gyi-na-loko (October or November).

Glaucidium cuculoides whiteleyi (Blyth)

Athene whiteleyi Blyth, Ibis, 1867, p. 313 (China).

A single female was taken at Shi-ku, on the banks of the Yangtze in March. This bird appears to be somewhat darker than a long series from Sechuan, Hupeh and Fukien in the Museum of Comparative Zoölogy.

Strix nivicola (Blyth)

Syrnium nivicolum Blyth, Journ. *Asiat.* Soc. Bengal, **14**, 1845, p. 185 (Himalayas).

A single male specimen was taken at Chou-yu-gko in April.

Bangs,[1] La Touche,[2] Rothschild[3] and Stuart Baker[4] seem to be agreed that *S. aluco harterti* La Touche and *Strix niripetens* Riley are synonyms of *nivicola*: that the wide individual variations of these owls cannot be grouped in any way in order to show that there is a race of the Indian bird in China. I have followed Bangs in keeping *nivicola* specifically distinct until there is more evidence that will point to its affinities with *aluco*.

[1] Bull. Mus. Comp. Zoöl. Harvard, **70**, No. 4, 1930, p. 197.
[2] Birds of East. China, **2**, pt. 2, 1932, p. 109.
[3] Novit. Zoöl., **33**, 1926, p. 233.
[4] Faun. Brit. Ind., **4**, 1927, p. 399.

Chalcites xanthorhynchus (Horsfall)

Cuculus xanthorhynchus Horsfall, Trans. Linn. Soc. **13**, pt. 1, 1821, p. 179 (Java).

A single female was taken north of Wei-hsi on the Mekong in September. This is the first record of this bird for Yunnan. It is, of course, surprising that it has never been taken before, but since it is known to breed in Assam it is not incredible.

Cuculus canorus bakeri Hartert

Vög. Pal. Faun., **2**, 1912, p. 948 (Shillong, Khasia Hills).

Rock has sent a series of eight mature birds, a male from Tao-mung-chung (April or May), two males, three females and two unsexed specimens from Chou-yu-gko (April).

Two birds just from the nest were taken at Champutong in July. These specimens have the exposed portion of the wing barred with brown.

Cuculus optatus optatus (Gould)

Proc. Zoöl. Soc. London, 1845, p. 18 (Port Essington, Australia).

A single male in juvenal plumage was shot in the mountains of Tse-chung in August or September.

Cuculus poliocephalus poliocephalus Latham

Ind. Orn., **1**, 1790, p. 214 (Srinagar).

Two males come from Chou-yu-gko (April), a female from Champutong (July) and an unsexed specimen from the mountains of Tse-chung (August or September).

Megalaema virens virens (Boddaert)

Bucco virens Bodd., Tabl. Pl. Enl., 1783, p. 53 (China).

An unsexed immature specimen was taken at Champutong in July.

Picumnus innominatus chinensis (Hargitt)

Vivia chinensis Harg., Ibis, 1881, p. 228, pl. 7 (May-chee, China).

A single male was taken in canebrake at Tao-mung-chung in April or May.

Macropicus forresti (Rothschild)

Dryocopus forresti Roths., Bull. B. O. C., **43**, 1922, p. 9 (Mekong Valley, Yunnan).

A female was taken at Tao-mung-chung in April or May and another at Chou-yu-gko in April. An unsexed specimen comes from the mountains of Tung-la (To-la) in August.

Picoides funebris Verreaux

Nouv. Arch. Mus. Paris, Bull., **6**, 1870, p. 33 (Mountains of Chinese Tibet).

An unsexed specimen comes from the mountains of Tung-la (To-la) (August), a male and an unsexed specimen from Mt. Gyi-na-loko (October or November), a female from Mt. Satseto (February) and two males and a female from Shwe-men-kan (January).

Dryobates nanus omissus (Rothschild)

Dryobates pygmaeus omissus Roths., Bull. B. O. C., **43**, 1922, p. 10 (Likiang Range).

A pair comes from Shwe-men-kan (January) and a single female from Mt. Satseto (February).

These specimens are larger than *Dryobates obscurus* La Touche (wing 104–106–103) and are somewhat less heavily striped and more buffy. This accords very well with the original description. Rothschild has emended his own description [1] and finds that *omissus* differs from *obscurus* only in its larger size.

Dryobates hyperythrus hyperythrus (Vigors)

Picus hyperythrus Vigors, Proc. Zoöl. Soc. London, pt. 1, 1831, p. 23 (Himalayan Mountains).

A male, a female and an unsexed specimen come from Tao-mung-chung (April or May), a pair from Chou-yu-gko (April), a female from Mt. Gyi-na-loko (October or November) and a female from Mt. Satseto (February).

I have followed Rothschild in referring this series to the Indian form. There seems to be no tinge of the dull brown with its lack of red that is characteristic of *subrufinus*, nor is the back whiter than in Indian birds.

[1] Novit. Zoöl., **33**, 1926, p. 238.

Dryobates darjellensis desmursi (Verreaux)

Picus desmursi Verr., Nouv. Arch. Mus. Paris, Bull., **6**, 1870, p. 33 (Mountains Chinese Tibet).

A female comes from Tao-mung-chung (April or May), a female, an unsexed specimen and an immature bird, sexed as a female, from the mountains of Tung-la (To-la) (August).

Dryobates major stresemanni Rensch

Zoöl. Erg. W. Stotz. Exp., in Abh. und Ber. Mus. Dresden, **16**, 1924, no. 2, pt. 3, p. 38 (Tsalila).

Two males and a female were taken at Tao-mung-chung in April or May, a single female at Chou-yu-gko in April, two females at Mt. Gyi-na-loko (October or November) and a male and two females at Mt. Satseto in February.

Picus canus sordidior (Rippon)

Gecinus sordidior Rippon, Bull. B. O. C., **19**, 1906, p. 32 (W. Yunnan).

Two males were taken at Tao-mung-chung in April or May, a single female west of Wei-hsi in June, an unsexed specimen in the mountains of Tung-la (To-la) in August, and a female at Mt. Gyi-na-loko in October or November.

Psittacula schisticeps finschi (Hume)

Palaeornis finschi Hume, Stray Feath., **2**, 1874, p. 509 (Kollidoo).

A male was taken at Shi-ku on the banks of the Yangtze in March and an immature male at Nv-lu-ko at the foot of the Likiang Snow Range in July.

Psittacula derbyana (Fraser)

Palaeornis derbyanus Fraser, Proc. Zoöl. Soc. London, 1850, p. 245, pl. 25 (No locality).

A male comes from Na-dza-gko, eastern slopes of Mt. Gyi-na-loko (April) and an unsexed specimen at Mt. Gyi-na-loko in October or November.

Spelaeornis rocki Riley

Proc. Biol. Soc. Wash., **42**, 1929, p. 214 (Mountains of Ho-fu-ping, Mekong Valley, Yunnan).

As Riley remarks, it is a strange thing to find a distinct species so close to the type locality of *Spelaeornis soulici* Oustalet. I have compared the specimens at hand carefully with the figure of the type of *soulici*.[1] As Riley found in comparing the type of *rocki*, so I find that the birds that Rock has sent are lighter above and the black apical spots are more conspicuous, that the flanks are lighter and the black apical spots of that region are smaller, and that the white of the throat extends to the jugulum. Of these characters I consider that the last only is of any value. Due to the fact that the spring birds are in worn and faded plumage (the ones at hand are distinctly so) and that all the birds in the Paris Museum were mounted and exposed to the light until very recent times and that consequently most of them are "foxed" badly, it can be readily understood that the colors of the new skins might very easily be quite different from the type and the differences be just such as are described above. However, the white of the throat does extend to the jugulum and for that reason I recognize *rocki*.

A female and an unsexed specimen come from Tao-mung-chung and a female and an immature bird from Chou-yu-gko (April).

Nannus troglodytes talifuensis (Sharpe)

Anorthura talifuensis Sharpe, Bull. B. O. C., **13**, 1902, p. 11 (Gyi-dzin-shan).

Two males, a female and an immature specimen were taken at Tao-mung-chung (April or May), two pairs at Mt. Gyi-na-loko (October or November), a male and two females at Mt. Satseto (December) and two males, a female and one unsexed specimen from the Likiang Snow Range (February).

In comparison with a series of birds taken in Sechuan in winter these birds are appreciably darker. There is, however, a good deal of individual variation.

A curious fact came to my notice in examining the series in the Museum of Comparative Zoölogy. It is that there are two specimens from Choni (Nos. 135,791, 135,792) which are indistinguishable from the Yunnan bird. They are quite mature and were taken in

[1] Novit. Zoöl., **17**, 1910, pl. 7, fig. 1.

winter. From another area they might be thought to belong to an intermediate form, but Choni should harbor an intermediate between the light *Nannus t. szetschuanensis* Hartert and the even lighter *Nannus t. idius* (Richmond) rather than a very dark form.

Prunella immaculata (Hodgson)

Accentor immaculata Hodgson, Proc. Zoöl. Soc. London, **13**, 1845, p. 34 (Nepal).

A single male was taken on Mt. Gyi-na-loko in October or November and five more at different levels of the west slopes of Mt. Satseto in December, January and February.

Prunella strophiata multistriata (David)

Accentor multistriatus David, Ann. Mag. Nat. Hist., **7**, 1871, p. 256 (Moupin).

Three males, three females and two unsexed specimens were taken on the east slopes of the Likiang Snow Range in November and December; two males, three females on the west slopes of Mt. Satseto in January and February; a male and an unsexed specimen at Tao-mung-chung in April or May; a single female at Chou-yu-gko in May and three unsexed specimens at Su-wa-tong, Tibet, in July.

Prunella collaris ripponi Hartert

Vög. Pal. Faun., **1**, 1910, p. 766 (Gyi-dzin-shan).

Of a series of six birds, five come from the Likiang Snow Range, a male was taken at Mt. Gyi-na-loko in October or November, a female in February at Mt. Satseto and a male and two females in March. A single male was taken at Su-wa-tong, Tibet, in July.

Prunella collaris berezowskii (Serebrowski)

Laiscopus collaris berezowskii Serebrowski, C. R. Acad. Sci. Leningrad, 1927, A, p. 325 (Lun-ngan-fu, Sechuan).

Serebrowski described this bird as being lighter than *Prunella c. nipalensis* (Blyth) and darker than *Prunella c. tibetanus* Bianchi. I add that it is like *Prunella c. ripponi* Hartert but larger. The wing measures 103 mm. in this specimen. It is also more dusky on the flanks.

Rock has sent a single male from Mt. Satseto (March).

Enicurus maculatus guttatus Gould

Proc. Zoöl. Soc. London, 1865, p. 664 (Sikkim).

A single immature specimen of this bird was taken at Champutong in July.

Enicurus leschenaulti sinensis Gould

Proc. Zoöl. Soc. London, 1866, p. 665 (Shanghai).

Two males were taken at Chou-yu-gko (April) and an immature specimen sexed as a female from the banks of the Wei-hsi River at 9,000 ft. in June.

Calliope tschebaiewi Przewalski

Mongol I. Stran. Tang., **2**, 1876, p. 44.

A single male comes from Tao-mung-chung (April or May).

Larvivora brunnea Hodgson

Journ. Asiat. Soc. Bengal, **6**, 1837, p. 102 (Nepal).

A single male was taken at Tao-mung-chung in April or May.

Phoenicurus schisticeps (Gray)

Ruticilla schisticeps Gray, Cat. Mamm. Birds Nepal Coll. Hodgson, 1846, p. 69 (Nepal).

In a series of twenty-two birds the wings measure: 81–86 for the males and 78–80 for the females. Five males were taken at Mt. Gyi-na-loko (October or November), two males and a single female at Shwe-men-kan (January), two males and seven females at Mt. Satseto at the end of January and the beginning of February; seven females at the same place in March.

Phoenicurus frontalis frontalis Vigors

Proc. Comm. Zoöl. Soc. London, 1832, p. 172 (Himalaya).

Three males and four females were taken at Mt. Gyi-na-loko in October, November, a pair on Mt. Satseto in December and a single male in March; two males and a single female come from Tao-mung-chung (April or May).

The autumn and winter males of this series have the feathers of the back tipped with reddish brown and the females are dark brown on the back rather than gray as are the spring and summer specimens.

Phoenicurus aurorea aurorea (Pallas)

Motacilla aurorea Pallas, Reis. Russ. Reichs., **3**, 1776, p. 695 (Selenka, Lake Baikal).

Two males were taken at Tao-mung-chung (April or May) and a female at Chou-yu-gko (April). They are no darker than specimens taken by Rock on the Kansu border of Sechuan in 1928. I have, therefore, followed Stuart Baker in considering the Yunnan bird to be identical with the Indian and northern Chinese birds.

Phoenicurus hodgsoni (Moore)

Ruticilla hodgsoni Horsfall & Moore, Cat. Birds Mus. E. Ind. Co., 1854, p. 308 (Nepal).

A male comes from Shwe-men-kan (January), a female from Mt. Satseto (February) and a female from Tao-mung-chung (April or May).

Rhyacornis fuliginosa fuliginosa (Vigors)

Phoenicura fuliginosa Vigors, Proc. Zoöl. Soc. London, 1831, p. 35 (No locality).

Six males and four females come from Tao-mung-chung, seven males and two females from Chou-yu-gko (April), two males from the mountains west of Wei-hsi (June) and one immature male from Su-wa-tong (July).

Chaimarrhornis leucocephala (Vigors)

Phoenicura leucocephala Vigors, Proc. Zoöl. Soc. London, 1831, p. 35 (Himalayas).

Rock has sent a male from Su-wa-tang, Tibet, (July) and two females from Tao-mung-chung (April or May). The male was molting.

Tarsiger chrysaeus vetellinus Stresemann

Journ. f. Orn., **71**, 1923, p. 365 (Washan).

A series of fifteen mature specimens proves this race to be lighter than the Indian bird which is noticeably more orange.

Six males and nine females come from Su-wa-tong, Tibet, (July), as do eleven immature specimens. A single female was taken at Mt. Gyi-na-loko (October or November). An immature bird taken at the mountains of Tung-la in August seems to have the flanks yellow; birds taken a month earlier do not.

Muscisylvia leucura Hodgson

Proc. Zoöl. Soc. London, 1845, p. 27 (Nepal).

A single immature specimen (unsexed) was taken at Champutong in July.

Rhodophila ferrea haringtoni (Hartert)

Oreicicla ferrea haringtoni Hartert, Vög. Pal. Faun., **1**, p. 711 (Lien-kiang bei Futschau, China).

Rock has sent a series of thirteen birds; a single male from Tao-mung-chung (April or May), seven males, a female and two immature specimens from the mountains west of Wei-hsi (June) and a male from the mountains of Tse-chung (August or September).

Ianthia indica yunnanensis (Rothschild)

Tarsiger indicus yunnanensis Rothschild, Bull. B. O. C., **43**, 1922, p. 10 (Likiang Range).

A male and three females were taken at Tao-mung-chung (April or May) and a single female at Chou-yu-gko in April.

Ianthia rufilata practica Bangs and Phillips

Bull. Mus. Comp. Zoöl., **58**, 1914, p. 292 (Loukouchai).

Of a series of twenty-one of these birds, a male and two females were taken at Tao-mung-chung (April or May), a single female at Chou-yu-gko (April), and three males and ten females from Mt. Gyi-na-loko (October or November). Three immature specimens were taken at the mountains of Tung-la and at Su-wa-tong (July).

Riley has remarked that males exhibit two color phases, one cyanite blue above and the other marine blue. This I find to be true of my specimens, except that the blue is rather closer to alizarine than to navy. This difference in coloration is shown by two specimens that were taken at the same locality at the same time.

Saxicola torquata przewalskii (Pleske)

Pratincola maura var. *przewalskii* Pleske, Wis. Res. Przewalski's Reis., Vög. **1**, 1889, p. 46 (Kansu).

Two males, a female and an immature specimen are from Tao-mung-chung (April or May), a single male from the Likiang Snow Range (March).

These birds are noticeably larger and darker than *Saxicola t. indica* (Blyth) and *Saxicola t. stejnegeri* (Parrot).

Myiophoneus coeruleus (Scopoli)

Gracula coerulea Scop., Del. Flor. Faun. Insubr., **2**, 1786, p. 88 (China).

A female comes from the mountains of Tung-la (To-la) (August) and a male from Mt. Gyi-na-loko (October or November).

Monticola rufiventris (Jardine and Selby)

Petrocincla rufiventris J. &. S., Illust. Orn., **3**, pl. 129, 1828 (Himalayas).
Turdus erythrogaster Vigors, Proc. Zoöl. Soc. London, 1831, p. 171.
Monticola erythrogastra Baker, Faun. Brit. Ind., **2**, p. 170.
Monticola erythrogaster La Touche, Handb. Birds East. China, 1925, p. 123.
Monticola rufiventer sinensis Meinertzhagen, Bull. B. O. C., **47**, 1927, p. 148.

An unsexed immature specimen and an immature female were taken in the mountains of Tung-la (To-la), above Ho-fu-ping, on the Mekong side of the Yangtze-Mekong Divide, 12,000 to 14,000 ft. in August.

These two specimens differ somewhat from the description in La Touche's "Handbook of the Birds of Eastern China," which is the most complete and satisfactory, and I therefore describe them here.

Feathers of the head and upper back are black with a large white spot; on the lower rump they are barred olive and black, and the upper tail coverts are barred bay and black. The ear coverts are black, some of the feathers having white shafts. Feathers of the throat have the white spot very large. On the breast the feathers have large yellow spots, and on the flanks these spots are brownish yellow.

A nestling from the La Touche collection, taken in Kuatun, N. W. Fukien on May 22, agrees very closely with the present series. The spots on the feathers are more uniformly yellow, however, and this character conforms more nearly to the general impression of yellowness that descriptions give. I believe that the difference is probably due to age, partly of the wild specimen when it was shot and partly to the "foxing" or fading toward brownish that skins undergo in museums.

Female specimens of *rufiventris* from China in this museum are not "darker or more slate colored above" nor have they "the ground

color of the feathers of the under parts more black brown, giving a darker appearance," [1] than specimens from Sikkim. I cannot find that the Chinese bird differs in any way from the Indian.

Turdus rubrocanus gouldi (Verreaux)

Merula gouldi Verr., Nouv. Arch. Mus. Hist. Nat. Paris, Bull., **6**, 1871, p. 34 (western Sechuan).

This series is made up of three males from Tao-mung-chung, taken in April or May, two males and two females from Chou-yu-gko, taken in April, and a pair, a single female and an unsexed specimen from the mountains of Tung-la (To-la), taken in August, and four males from Mt. Satseto (October or November).

This bird appears to be confined to high altitudes. I cannot find that it has ever been taken below 10,000 ft.

The series is remarkably uniform. There are none of the individual differences reported to occur. The females are lighter than the males.

Turdus naumanni eunomus Temminck

Pl. Col., 1830, p. 514 (Japan).

Of nine specimens in the series there are four males, one from the banks of the Yangtze at Shi-ku, two from the eastern slopes of Mt. Satseto (December), and a fourth from the eastern slopes of the Likiang Snow Range (February). Four females come from Tao-mung-chung (April or May) and a single female from Shwe-men-kan (January).

Dr. B. Stegmann of the Academy of Sciences, Leningrad, writes that the breeding area of *Turdus n. eunomus* Temm. lies to the northward of *Turdus n. naumanni* Temm. The breeding area of *eunomus* is Siberia, from the southern edge of the tundra and the lower course of the Jenissei, south to the northern Baikal Range and east to Bering Sea. *Turdus n. naumanni* Temm. breeds from the middle reaches of the Jenissei River over the northern Baikal Range and south Jakutia to the Stanoi Range. The breeding areas of these two birds do not overlap.

Dr. Stegmann believes that the differences in coloration are great enough so that these birds might be considered as distinct species. However, he also says that their habits and voice are very similar and that they may with reason be thought to be subspecies.

Since their breeding ranges do not overlap, their habits are similar and they are so similar in appearance, I prefer to list them as subspecies.

[1] vide Meinertzhagen Bull. B. O. C., **47**, 1927, p. 148.

Turdus naumanni naumanni Temminck

Man. d'Orn., **1**, 1820, p. 170 (Eastern Europe).

A male comes from Tao-mung-chung and a female from the Likiang Snow Range, east slopes of Mt. Satseto. The former was taken in April or May and the latter in March. Two unsexed specimens were shot at the foot of the Likiang Snow Range in March.

The male is darker than the female, having the feathers of the upper breast marked with a chestnut subterminal bar while the female has the bars amber.

Turdus obscurus Gmelin

Syst., Nat., **1**, 1789, p. 816 (Lake Baikal).

Three females were taken at Mt. Gyi-na-loko in October or November.

Turdus mupinensis conquistus Bangs

Bull. Am. Mus. Nat. Hist., **46**, 1921, p. 591 (Likiang Range).

Two males were taken at Tao-mung-chung in April or May.

Turdus ruficollis ruficollis Pallas

Reise Russ. Reichs, **3**, 1776, p. 694 ("In Summis ingis Dauuriae").

Only one specimen, a male, was collected at Tao-mung-chung in April or May.

Turdus mollissimus mollissimus Blyth

Journ. Asiat. Soc. Bengal, **11**, 1842, p. 188 (Darjeeling).

Rock has sent two males from the east slopes of Mt. Gyi-na-loko taken in October or November. These birds have the terminal black bars of the underparts not crescentic like the typical bird but rather drawn straight across the feather. There are also fewer of these black bars so that the underparts appear lighter and the belly pure white. The color of the back is a light greenish brown, not the dark olive brown of the Indian bird.

Of a series of ten skins kindly loaned to me by the United States National Museum, nine are identical with the Indian bird, the tenth, however, is much like the birds that Rock has just sent. It was shot at Mt. Omei, Sechuan in December.

Breeding specimens of *mollissimus* have been taken in northwest Yunnan and southeast Sechuan. It does not seem very probable that there is a geographical representative isolated in this region, mountainous and given to curious faunal variations as it is.

Turdus dauma socius (Thayer and Bangs)

Oreocincla dauma socia Thayer & Bangs, Mem. Mus. Comp. Zoöl., **11**, No. 4, Aves, 1912, p. 174 (Tatsienlu).

A single male comes from Tao-mung-chung (April or May).

Pomatorhinus ruficollis similis Rothschild

Novit. Zoöl., **33**, 1926, p. 261 (Hills near Tengyueh).

A single female taken in the mountains of Tung-la (To-la) in August has the outer webs of the primaries brown instead of grayish green and a browner appearance than the other specimens in the series. Only the base of the upper mandible is black, whereas two-thirds of the upper mandible is black in the other birds of this series. The wing measures 81 mm., the tail 100 mm., the exposed culmen 18 mm.

There are eleven specimens in the series, three males and two females from Tao-mung-chung (April or May), two males and three unsexed specimens from Mt. Satseto (December).

Pomatorhinus macclellandi dedekensi Oustalet

Ann. Sci. Nat. Zoöl., ser. 7, **12**, 1892, pp. 276, 304 (Southern Shensi).

A male and two unsexed specimens have been sent from Tao-mung-chung (April or May), a pair from Chou-yu-gko (April) and three pairs from the western slopes of Mt. Satseto in December, January or February.

Pomatorhinus m. gravivox David, the eastern form, seems to be browner and less green, season for season, than *Pomatorhinus m. dedekensi* Oust. from western Sechuan and northern Yunnan. It is also smaller, the wing measuring 90–95 mm. as against 98 and over. *Pomatorhinus m. odicus* Bangs and Phillips, which is the southern Yunnan form, is smaller still, but resembles *dedekensi* very closely in other respects.

I have examined six specimens of *gravivox* from Hupeh taken in May, June, October, November, January and February, two specimens of *dedekensi* from the Likiang range (June) and two from south-

western Sechuan (May and January), as well as a very long series of *odicus* from the vicinity of Mongtz. There is a great deal of individual variation in the size of the bill as well as the colors in this group. The color of the back seems to have "foxed" or grown browner in the older specimens.

Garrulax albogularis albogularis (Gould)

Ianthocincla albogularis Gould, Proc. Zoöl. Soc. London, 1835, p. 187 (Nepal).

Six males and eight females have been sent from Tao-mung-chung and Chou-yu-gko in April and May. These birds are slightly darker than specimens of *albogularis* from northern India in the Museum of Comparative Zoölogy.

Garrulax subunicolor griseata (Rothschild)

Ianthocincla subunicolor griseata Roths., Novit. Zoöl., **28**, 1921, p. 33 (Schweli-Salween divide).

To Rothschild's description I add that the specimens at hand have the feathers of the cheeks and ear coverts with whitish shafts, contrasting with the head and neck.

Two pairs, a male and a female have the primaries molting. They were taken at Su-wa-tong, Tibet, in July.

Garrulax affinis oustaleti (Hartert)

Ianthocincla affinis oustaleti Hart., Vög. Pal. Faun., **1**, 1909, p. 633 (Tsekou).

Two males and a female were taken at Tao-mung-chung in April or May and a pair at Chou-yu-gko in April, eight males on the Likiang Snow Range in October, November and December and two unsexed specimens from the east slopes of the same range in February, seven males, six females and six unsexed immature specimens from Su-wa-tong, Tibet, (July) and a single male from Su-wa-tong in January. A nestling was taken at the mountains of Tung-la (To-la) in August.

The nestling agrees perfectly with the description that Rothschild gives.[1] "Plumage differs from the adults by the brown, not black, crown, the absence of the gray patch at the side of the neck, and the uniform brown of upper and underside."

[1] Novit. Zoöl., **33**, 1926, p. 264.

Garrulax elliotii elliotii (Verreaux)

Trochalopteron elliotii Verreaux, Nouv. Arch. Mus. Paris, Bull., **6**, 1870, p. 36 (Mountains of Chinese Tibet).

Two males, five females and two unsexed specimens were taken at Tao-mung-chung in April or May; two males and one female at Chou-yu-gko in April; a male and two unsexed specimens at the mountains of Tung-la (To-la) in August; a single female at Champu-tong (Chamutang) in July; an unsexed specimen on the eastern slopes of Mt. Satseto in March, and five males, three females and one unsexed specimen at Mt. Gyi-na-loko in October or November. This series of twenty-two specimens was taken at all seasons of the year in the Likiang District.

After a careful comparison of these birds and a good series in the Museum of Comparative Zoölogy, it is apparent that the silvery white tips to the feathers, particularly of the throat, are lost by a process of wearing in the spring and summer. For this reason there is little doubt that *Garrulax bonvaloti*, which Oustalet described "with many reservations" from Chatou, Tibet, as being without the little white marks on the head, cheeks, neck and breast, is a synonym of *Garrulax e. elliotii* (Verr.). Riley [1] and Berlioz [2] are agreed about this.

Winter birds are likewise somewhat darker and grayer than summer birds. Although I have no specimens identified as *Garrulax e. yunnanense* Rippon, described from the Yangtze River, Likiang Range, Yunnan, as darker and altogether grayer than *elliotii*, I am inclined to believe that Riley is right that this character is due to seasonal variation and that *yunnanense* cannot be maintained as a valid race.

Furthermore these birds conform very closely to the description of *Garrulax e. prjevalski* which Menzbier described [3] from Kansu. As Bangs and Peters have said, [4] the gray instead of greenish tail feathers seems to be the only distinguishable character by which *prjevalski* can be separated from *elliotii*. The present series shows gradation from gray to green.

Garrulax cineracea styani Oustalet

Bull. Mus. Paris, **6**, 1898, p. 226 (Ta-tsien-lou).

Two specimens of this bird, both males, were taken in the mountains of Tse-chung in August or September, 1931.

[1] Proc. U. S. Nat. Mus., **80**, 1931, p. 37.
[2] Rev. Hist. Nat. 1, 2, 3, 1930.
[3] Ibis, 1887, p. 300.
[4] Bull. Mus. Comp. Zoöl., **68**, 1928, p. 341.

These two specimens have the cheeks white, the superciliary line olive gray and the ear coverts a faded color approaching buffy yellow. Some of the feathers of this region are white at the base and buffy yellow only at the tip. I place them with *styani* after Rothschild,[1] rather than La Touche,[2] because of the plate of *cinereiceps* with Styan's description,[3] which shows the chestnut ear coverts and superciliary line quite plainly.

There are, however, in the collections of the Museum of Comparative Zoölogy, two specimens with the olive gray superciliary line and the faded buffy yellow ear coverts, which obviously are *styani*, but which were taken at Szemao, south Yunnan, on February 28, far south of the range assigned to them by Rothschild. Bangs in an unpublished paper which he has kindly allowed me to see, has suggested that these birds migrated south to Szemao in winter.

Garrulax bieti (Oustalet)

Ianthocincla bieti Oust., Bull. Mus. Paris, **3**, 1897, p. 163 (Tsekou, upper Mekong, Yunnan).

Rock has sent a male and three females from Tao-mung-chung, taken in April or May. There is also an unsexed specimen from Chou-yu-gko, above Tao-mung-chung.

There is a great deal of individual variation in the color of the head and the extent of the subterminal black bars of the feathers of the side of the neck and the flanks. I am inclined to agree with Riley[4] that these are age characters.

A specimen sexed as a female, with the fluffy plumage and relatively pointed remiges of immaturity, has the feathers of the head medal bronze and the subterminal black bars of the sides of the neck and the flanks are lacking.

Garrulax lanceolatus lanceolatus (Verreaux)

Pterorhinus lanceolatus Verr., Nouv. Arch. Mus. Paris, Bull., **6**, 1871, p. 36 (Mountains of Chinese Tibet).

Four males, a female and an unsexed specimen were shot at Tao-mung-chung (April or May).

Even in this small series the character of the color of the moustachial line does not run true. In two specimens it is almost auburn

[1] Rothschild, Novit. Zoöl., **33**, 1926, p. 264.
[2] Birds of Eastern China, **1**, p. 60.
[3] Ibis, 1887, p. 167, pl. 6.
[4] Proc. U. S. Nat. Mus., **80**, 1931, p. 34.

with black tips to the feathers, while in the others it ranges from darker brown to black.

I consider *Garrulax bonvaloti* Oust. and *Garrulax yunnanensis* Rippon to be synonyms of *lanceolatus*.

Garrulax ocellatus similis (Rothschild)

Ianthocincla ocellata similis Roths., Novit. Zoöl., **28**, 1921, p. 34 (Shweli-Salween Divide).

This bird is apparently an intermediate form between *Garrulax ocellatus ocellatus* (Vig.) and *Garrulax ocellatus artemisiae* (David and Oustalet). It resembles *ocellatus* rather than *artemisiae* in that the color of the ear coverts is rather brown than black or gray; this brown is, however, much lighter than the single specimen of *ocellatus* in the Museum of Comparative Zoölogy. The superciliary line is as light as in *artemisiae*.

The character which Lord Rothschild mentions for *artemisiae* in his description of *similis* [1] ". . . feathers of the breast and foreneck having large black markings," does not seem to be borne out in the small series in the Museum of Comparative Zoölogy. There is, however, a female of *artemesiae* which has the color of the ear coverts brownish gray and this would lead one to believe that there must be a more distinctly intermediary form which is now furnished by the specimen in question.

Apparently forms like the present one have never been taken. Rock collected this one from Chou-yu-gko in April.

Garrulax maximus maximus (Verreaux)

Pterorhinus maximus Verreaux, Nouv. Arch. Mus. Paris, Bull., **6**, 1870, p. 36, pl. 3 (No locality).

Four males and two females come from Mt. Gyi-na-loko (October or November) and a female from Shwe-men-kan (January) and two males from the Likiang Mountains (west slopes) taken in February, 1932.

Garrulax maximus khamensis (Serebrowski)

Ianthocincla maxima khamensis Serebrowski, C. R. Ac. Sci. de l'U. R. S. S., Leningrad, 1927, p. 325 (Kham country, E. Tibet).

Unfortunately Rock has sent only a single specimen of this bird from the mountains of Tung-la (To-la) (August). It is apparently an

[1] Novit. Zoöl., **28**, 1921, p. 34.

immature bird, but in comparison with other immature birds from Sechuan it is noticeably smaller. This is the only character that holds. The paler underside and the narrower dark bars of the chest seem to be age characters as Berlioz has remarked.[1] Its small size has led me to place it with the Kham bird but not without a good deal of misgiving.

Garrulax sannio sannio Swinhoe

Garrulax sannio Swinh., Ibis, 1867, p. 403 (Amoy, Fukien).

It is apparent from the long series in the Museum of Comparative Zoölogy, taken at all seasons of the year from Fukien to southern and western Yunnan, that this bird is darker in winter than in summer and that this change is due largely to the wearing of the feathers. Birds killed in the province of Hupeh in November and December are as dark as those taken at Mongtz, southern Yunnan, at the same season. Everywhere they all become lighter as the season goes on. There is a molting bird shot at Mongtz in June in the collections of this museum.

La Touche[2] says "the birds at Mongtz laid in April, and the young were about the first week in May." There is no molting bird of September or October in the collection. The plumage of the November birds is quite fresh, however. The literature on the birds of China is sadly lacking in information on the subject of migrations.

It seems to me probable that *Garrulax albospecularis* (Godwin-Austin) is *Garrulus sannio sannio* Swinh. in worn plumage and for this reason I follow Rothschild and Riley in relegating this name to synonomy.

Garrulax poecilorhyncha ricinus (Riley)

Dryonastes berthemyi ricinus Riley, Proc. Biol. Soc. Wash., **43**, 1930, p. 80 (Ndamucho, Yunnan).

In this series are two males from Chou-yu-gko (April or May).

This series in comparison with four specimens from the La Touche collection which were taken from the type locality, Kuatun, Fukien, in April and May are more olivaceous and less rufous on the head and back and the cinnamon buff of the breast is lighter. The forehead is, however, not more strongly and extensively tinged with tawny.

[1] Rev. d'Hist. Nat., no. 1, 1930, p. 14.
[2] Birds of Eastern China, p. 57.

I add to Riley's description that the terminal white bands of the outer rectrices are slightly broader and the webs of the outer rectrices are more dusky rather than brownish.

Since the Yunnan bird has the same color pattern as *poecilorhynchus* of Formosa, only differing from it in the lighter color, I prefer to consider the group as a "formenkreis" and I concur with LaTouche[1] and Stresemann [2] in doing so.

Lioparus chrysotis forresti (Rothschild)

Fulvetta chrysotis forresti Roths., Bull. B. O. C., **46**, 1926, p. 64 (Shweli-Salween Divide).

There can be no doubt that these birds are *forresti*. In comparison with birds collected by Weigold at Kwantsien, of which Rothschild speaks in the original description, and of which I have two specimens at hand, they are much deeper orange below, the primaries are edged with orange and the throat is flecked with white.

Rock has sent a series of six, four males, one female and one unsexed specimen from Tao-mung-chung (April or May).

I prefer to consider *swinhoei* and *forresti* as well as *chrysotis* as geographical representatives of the same group. Because of the very striking difference in color, the shorter hind claw and the smaller bill, I have followed Stuart Baker in retaining the genus Lioparus rather than lump these birds with the genus Fulvetta.

Fulvetta ruficapilla sordidior (Rippon)

Proparus sordidior Rippon, Bull. B. O. C., **13**, 1903, p. 60 (W. Yunnan).

Five males and four females were taken at Mt. Satseto in December.

Fulvetta striaticollis striaticollis (Verreaux)

Siva striaticollis J. Verreaux, Nouv. Arch. Mus. Paris, Bull., **6**, 1870, p. 38 (Moupin).

Three specimens, two males and a female come from Shwe-men-kan (January).

These specimens are somewhat lighter below than the specimens from Sechuan in the collections of the Museum of Comparative Zoölogy. There are intermediates, however, and since the birds that Rock has

[1] Birds of East China, 1925, p. 57.
[2] Abh. u. Ber. d. Mus. f. Tierk. u. Volkerk. zu Dresden, **16**, No. 2, 1923, p. 23.

sent are winter specimens and those in the Museum of Comparative Zoölogy were taken in summer, I am inclined to believe that lightness is a seasonal character.

Fulvetta cinereiceps yunnanensis (Rothschild)

Proparus striaticollis yunnanensis Roths., Bull. B.O.C., **43**, 1922, p. 11 (Mekong-Salween Div.).
Fulvetta insperata Riley, Proc. Biol. Soc. Wash., **43**, 1930, p. 123.

Because there have been several errors made in the identification of this bird in the past, I have had a good deal of difficulty in diagnosing it. In the first place Rothschild erred in placing it with the *striaticollis* "formenkreis." It undoubtedly belongs with the *cinereiceps* group. Secondly, this mistake confused Riley when he found this bird in the collection sent to the United States National Museum by Rock. I have the type of his *Fulvetta insperata* at hand and it is identically the same as my birds, which Kinnear has seen and identified as *Fulvetta s. yunnanensis* Roths., after comparing them with specimens in the British Museum.

The Chinese forms of the genus may be identified by the following key:

A. Flanks and belly alike
  a. Ear coverts black ..... *rinipectus bicti*
  b. Ear coverts striped ..... *striaticollis*
B. Flanks and belly different
  a. Distinct white ring around the eye ..... *ruficapilla*
  b. No white ring around the eye
    b′. Three innermost primaries edged with brown *cinereiceps*
    b″. Three innermost primaries all black ..... *fucata*

The cinereiceps group may be diagnosed as follows:

A. Head gray; no black stripe
  a. Back distinctly reddish brown ..... *cinereiceps*
  b. Back lightly washed with red ..... *fessa*
B. Head brown; indistinct black lines ..... *guttaticollis*
C. Head sooty brown; distinct black lines ..... *yunnanensis tonkinensis*

There is no character that will serve to distinguish *yunnanensis* and *Fulvetta c. tonkinensis* Delacour, which may conveniently be put into a key, though when specimens of each are seen together the differ-

ences are marked. *Fulvetta c. tonkinensis* is much darker. The brown of the flanks and rump is deeper and redder and the crown is a darker gray.

I have never seen a specimen of *Fulvetta ruficapilla manipurensis* Grant and I am not sure that it belongs to the *ruficapilla* group. Kinnear has written to me as follows: "... *Fulvetta r. manipurensis* ... has the head intermediate in color between *yunnanensis* and *sordidior*, the back tinged with the color of the head and the rump richer — an ochraceous brown — below, the thighs and abdomen are similar to the rump and the breast is also tinged with the same color as the back."

As far as is known the ranges of the Chinese forms of Fulvetta may be outlined as follows:

Fulvetta vinipectus bieti Oust.; from the Mekong Valley in southeast Tibet, east to Tatsienlu where it breeds in late May (Weigold), south to Tseku and the Shweli-Salween Divide.

Fulvetta s. striaticollis (Verr.); Upper Tebbuland, Kansu, south to Tatsienlu, where it breeds in July (Weigold).

Fulvetta r. ruficapilla (Verr.); Tsin-ling mountains, northern Sechuan, south to Kwan and Tankwan, southern Sechuan.

Fulvetta ruficapilla sordidior Roths.; mountains of Ho-fu-ping, Yangtze-Mekong Divide, east to the Likiang Range and south to the Tengueh District.

Fulvetta c. cinereiceps (Verr.); Western Sechuan, where it has been taken in spring, summer and early autumn, east to Hsien-shansien, Hupeh, where Zappey took it in December, and Ichang, Hupeh, from which locality an autumn bird was described by Styan. It is recorded as "resident" in Hupeh by Gee, Moffet and Wilder.[1]

Fulvetta c. fessa Bangs and Peters; Ha Tebbuland and Choni, Kansu.

Fulvetta c. guttaticollis La Touche; Fukien (resident), Kwantung (winter).

Fulvetta c. yunnanensis Roths.; Mekong Valley, Mekong Salween Divide; Yangtze-Mekong Divide.

Fulvetta fucata Styan; Hupeh; Ho-chaping (in the mountains north of the Yangtze) (April) and Ichang (December).

It is not yet possible to say whether *Fulvetta c. cinereiceps* and *Fulvetta fucata* have overlapping breeding areas, nor do we know whether *Fulvetta c. yunnanensis* Roths. and *Fulvetta r. sordidior* Roths. nest in the same locality somewhere in their ranges.

Rock has sent a pair and a single unsexed specimen from Tao-mung-chung (April or May) and a male from Chou-yu-gko, taken in April.

[1] Pekin Soc. Nat. Hist., Bull., 1, 1926, p. 177.

Fulvetta vinipectus bieti (Oustalet)

Alcippe bieti Oust., Ann. Sci. Nat., **12**, 1892, p. 283, pl. 9, fig. 2 (Ta-tsien-lou).

This good series consists of two males, two females and two unsexed specimens from Tao-mung-chung (April and May); four males from Chou-yu-gko (April), two females and two unsexed specimens from the Mountains of Tung-la (August), a male from the Likiang Snow Range; a male and an unsexed specimen from Su-wa-tong, Tibet, in July. In December Rock got four pairs, a female and an unsexed specimen on Mt. Satseto, and in February a male and two females.

Moupinia poecilotis sordidior Rothschild

Novit. Zoöl., **28**, 1921, p. 36 (Likiang Range).

Rock has sent four males, one from the Likiang Snow Range (March), two from the Shwe-men-kan (January) and one from Likiang Range (February).

Schoeniparus dubius genestieri (Oustalet)

Alcippe genestieri Oust., Bull. Mus. Hist. Nat. Paris, **3**, 1897, p. 210 (Tsekou).

A male and one unsexed specimen were taken at Tao-mung-chung (April or May) and another male was taken in the mountains west of Wei-hsi in June. Four males and seven females come from Mt. Satseto. One male and five females were taken in February, the others in December.

Pseudominla castaneiceps castaneiceps (Hodgson)

Minla castaneiceps Hodgs., Ind. Rev., 1838, p. 38 (Nepal).

One unsexed specimen comes from Champutong (Chamutang) (July).

This appears to be the extreme northern and eastern extent of the range. Stuart Baker [1] gives the range east to the Shan States and the hills of central and east Burma. Rothschild [2] reports that Forrest was the only collector to send this bird from Yunnan and he only sent eight from the Tengueh District and the Schweli-Salween Divide. It is curious that La Touche has not recorded the bird from southern Yunnan, since Delacour [3] found it quite common at Chapa, near Lao-

[1] Faun. Brit. Ind., p. 289.
[2] Novit. Zoöl., **23**, 1926, p. 270.
[3] Ois. de l'Indo-Chine, p. 308.

Kay, in northern Tonkin, although he has not found it elsewhere, nor did Van Tyne [1] take it in upper Laos. In the present state of knowledge, therefore, its range is discontinuous and it is isolated at Chapa, 250 miles from the border of the Shan States.

HETEROXENICUS CRURALIS FORMASTER Thayer and Bangs

Mem. Mus. Comp. Zoöl., **40**, 1912, p. 169 (Washan, W. Sechuan).

Anyone attempting to identify birds of this group will find that a good deal of confusion has existed. There have been three forms described:

1. *Heteroxenicus c. cruralis* Blyth, ranging from Simla eastward, both north and south of the Brahmaputra, through Assam, the Chin and Cachin Hills of northern Burma to S. W. Yunnan (two specimens of this form from Mongtz are in the Museum of Comparative Zoölogy).

2. *Heteroxenicus c. laurentii* La Touche, which is only known from the type, which comes from Mongtz and is in the Museum of Comparative Zoölogy. Since this bird was shot in October it would seem probable that it was on migration in southern Yunnan. It is indistinguishable from

3. *Heteroxenicus c. formaster* Thayer and Bangs, the type of which comes from Washan in western Sechuan, and is recorded by Riley [2] from the Likiang Range. The wing of the type specimen measures 73 mm. as does the wing of the type of *Heteroxenicus c. laurentii* La Touche.

Rock has sent a male from Tao-mung-chung, taken in April or May and a pair from Chou-yu-gko, taken in April. The males are at once recognizable as the Chinese bird because of the stout bill and I have placed them with *formaster* in the belief that *laurentii* is a synonym of that form, La Touche having somehow, unaccountably, overlooked it. The female which Rock has sent resembles the Indian bird a little more in color than it does the Chinese, but because this shade of olivaceous brown is variable and subject to fading and the size of the bird (wing 71 as against 65 for females of the Indian bird in the Museum of Comparative Zoölogy), I have placed it with *formaster*.

There is one more difficulty. Rothschild has recorded [3] *Brachypteryx* (*Heteroxenicus*) *c. cruralis* Blyth from the Likiang Range. I think it probable that since Rothschild had never seen specimens of the large billed form from China, the specimens that he has recorded as *cruralis* are really *formaster*.

[1] Field Mus. Nat. Hist. Zoöl. ser., **18**, 1931.
[2] Proc. U. S. Nat. Mus., **80**, 1931, p. 51.
[3] Novit. Zoöl., **33**, 1926, p. 271.

Leioptila desgodinsi desgodinsi (David and Oustalet)

Sibia desgodinsi Dav. & Oust., Bull. Soc. Philom. Paris, **1**, 1877, p. 139 (Yerka-lo).

Two pairs come from the mountains of Tung-la (To-la) (July), a male from Champutong (July), a male, a female and an unsexed specimen from Tao-mung-chung (April or May), two males from Chou-yugko (April), a male and two females from Mt. Gyi-na-loko (October or November) and two males and three females from Mt. Satseto (December and February).

Leioptila pulchella coeruleotincta Rothschild

Novit. Zoöl., **28**, 1921, p. 38 (Shweli-Salween Divide).

Two males and three females were taken at Su-wa-tong, Tibet, in July.

Stachyridopsis ruficeps bhamoensis (Harington)

Ann. Mag. Nat. Hist., ser. 8, **2**, 1908, p. 245 (Bhamo).

Three specimens, two males and a female, were taken on the mountains of Tse-chung in August or September and a pair at Champutong (Chamutang) in July.

These birds are clearly the breeding birds of the region. They are molting. They resemble very closely *Stachyridopsis r. bangsi* La Touche but they differ in having the black lines of the throat much more clearly defined and much larger. Their upper plumage is rather faded as in other summer birds in the series of the Museum of Comparative Zoölogy.

Siva strigula yunnanensis Rothschild

Novit. Zoöl., **28**, 1921, p. 40 (Likiang mountains).

This is a good series of twenty-five specimens, a male and two females from Tao-mung-chung (April or May), two pairs from the mountains of Tung-la (To-la) (August), eight males, seven females and an unsexed specimen from Mt. Satseto (December) and a single female from Shwe-men-kan (January).

The series from Tao-mung-chung and the mountains of Tung-la, taken in spring and summer are all in the gray plumage, which according to Rothschild [1] and Riley [2] is characteristic of birds at this season

[1] Novit. Zoöl., **28**, 1921, p. 40.
[2] Proc. U. S. Nat. Mus., **70**, 1926, p. 30.

of the year. Winter birds taken at Mt. Satseto and Shwe-men-kan are in the brownish plumage.

The irides of these specimens are all recorded as "bright red or crimson" while the eye of *Siva s. castaneicauda* Hume is recorded by Stuart Baker [1] as deep brown, as it is on the label of a specimen taken at Simla in the collections of the Museum of Comparative Zoölogy.

Yuhina gularis griseotincta Rothschild

Novit. Zoöl., **28**, 1921, p. 42 (Shweli-Salween Divide).

Three specimens, all males, two from the Mountains of Tung-la or To-la, taken in August, and one from Su-wa-tong, Tibet, taken in July, are distinctly darker than the specimens of *Yuhina g. yangpiensis* Sharpe from Sechuan. Although they are summer birds and in worn plumage, the crest is a deeper shade of brown, contrasting with the back; the throat and chest are washed with a more deep vinous tinge and the belly is a deeper buff. A pair from Shwe-men-kan, taken in January and three males and a female from Mt. Satseto are still darker.

The birds of this series have stouter bills than the Sechuan specimens in the collections of the Museum of Comparative Zoölogy. They measure 18–19 mm., while four specimens of *yangpiensis* measure 16–17 mm.

They compare closely with a single specimen of *Yuhina g. gularis* Hodgs., but since this bird was taken in 1872 it has probably "foxed" with time.

As Rothschild has remarked, this is a bird of high altitudes.

Yuhina diademata ampelina Rippon

Bull. B. O. C., **11**, 1900, p. 12 (Warar-Bum east of Bhamo).

Rock has sent sixteen specimens. Five males and four females were taken from Tao-mung-chung (April or May); three males and two females from Chou-yu-gko (April); a male from the Likiang Snow Range, eastern slopes of Mt. Satseto (March) and an immature male from the Mountains of Tung-la (August). Six males, four females and one unsexed specimen were taken at Mt. Satseto in October, November, December and February.

[1] Faun. Brit. Ind., 1, 1922, p. 314.

Yuhina occipitalis obscurior Rothschild

Novit. Zoöl., **28**, 1921, p. 42 (Likiang Range).

Rock has sent ten males and two females from Chou-yu-gko (April), seven pairs and six unsexed specimens from the mountains of Tung-la (To-la) (August), seven males and three females from Tao-mung-chung (April or May), one male and two females from Su-wa-tong, Tibet, (July) and one male from Mt. Satseto (December).

Yuhina nigrimentum intermedia Rothschild

Bull. B. O. C., **43**, 1922, p. 11 (Mekong Valley).

Twelve specimens are much darker below than a series of *Yuhina n. pallida* La Touche from Kuatun, Fukien. They have grayer throats.

In this series there are six males, three females and three unsexed specimens all from Champutong (Chamutang), taken in July.

Erpornis xantholeuca griseiloris Stresemann

Journ. f. Orn., **71**, 1923, p. 364 (Siuhang, Kwangtung).

Having only a single specimen of the Indian bird for comparison, and that an old one, I follow Stresemann in separating the Yunnan bird, although, as he says, the character of the color of the head appears to be variable. Furthermore, I do not believe that the character of the greenness or yellowness of the back is stable, and I separate this bird with reluctance.

Rock has sent one specimen from Champutong (Chamutang), taken in July.

Myzornis pyrrhoura Hodgson

Journ. Asiat. Soc. Bengal, **12**, 1843, p. 984 (Nepal).

This bird is apparently rare as far east as Yunnan and confined to high altitudes as it is in Nepal and Sikkim.[1] Rock has never taken it before and Forrest has only sent six to Rothschild from the Schweli-Salween Divide and four from the Mekong-Salween Divide. In his report Rothschild says[2] that Oustalet reported a specimen sent to him by the Reverend Father Soulie from Tsekou in 1900.

Five males, two females and two unsexed specimens (July) from Su-wa-tong.

[1] Faun. Brit. Ind., 1, 1922, p. 344.
[2] Novit. Zoöl., 33, 1926, p. 278.

Pteruthius aerulatus ricketti O.-Grant

Bull. B. O. C., **14**, 1904, p. 92 (Kuatun, Fukien).

Two pairs were taken at Tao-mung-chung (April or May), a pair at Mt. Satseto (December) and a male at Shwe-men-kan (January).

Pteruthius xanthochloris pallidus (David)

Allotrius xanthochloris var. *pallidus* David, Nouv. Arch. Mus. Paris, Bull., **7**, 1871, p. 14 (frontiers of Kookonor).

A pair come from Tao-mung-chung (April or May), an unsexed specimen from the mountains of Tse-chung (August or September) and three pairs and a female from Mt. Satseto (December).

Suya sp.

There is an immature bird in the collection which I cannot identify surely. It is perhaps *Suya parrirostris* La Touche.

Alcippornis nipalensis yunnanensis (Harington)

Alcippe fratercula yunnanensis Harington, Bull. B. O. C., **33**, 1913, p. 63 (Gyi-dzin-shan, east of Talifu).

In comparison with two specimens of *Alcippornis n. fratercula* Rippon in the Museum of Comparative Zoölogy, I find that the heads of the series of seventeen birds in question are lighter gray, that the blackish superciliary line is less distinct and discontinuous, but here the differences cited in the original description cease. The underparts of the Yunnan bird are said to be "paler and of a more yellowish tinge." The under parts of the series that Rock has sent are more buffy on the breast and flanks but could not be spoken of as paler. The bill of the Yunnan bird is said in the original description to be smaller but the bills of the series at hand are noticeably larger and heavier.

It may be that the difference in coloration of the under parts is a seasonal one since the type of *Alcippornis n. yunnanensis* Harington was taken in April and the series at hand was taken in August and September. Unless, however, the birds at hand are freshly molted I cannot see that this would account for the more buffy tone to the color. It would seem likely that these birds molt in July or August since La Touche has taken *Alcippornis n. hueti* David breeding in Fukien in late June [1] but there is not a single molting bird in this series.

[1] Birds of East China, p. 75.

The Yunnan bird is undoubtedly different from its close relative *Alcippornis n. fratercula* Rippon, the range of which lies to the west and southwest, in being more buffy on the breast and flanks and having the top of the head more gray and less brownish, and from *Alcippornis n. schaefferi* La Touche in having the underparts (breast and flanks) much more buffy, *schaefferi* being lighter below than *fratercula*.

Rock has sent a single male from Su-wa-tong, two females and three unsexed specimens from Champutong (Chamutang) and two males, four females and five unsexed specimens from the Mountains of Tse-chung (August).

Tribura thoracica thoracica (Blyth)

Dumeticola thoracica Blyth, Journ. Asiat. Soc. Bengal, **14**, 1845, p. 584 (Nepal).

Five males, a single female and two unsexed specimens were taken at Su-wa-tong, Tibet, (July), and a single male from the mountains of Tung-la (August).

Neornis flavolivaceus intricatus (Hartert)

Horeites flavolivaceus intricatus Hartert, Vög. Pal. Faun., **1**, 1909, p. 533 (Tai-pai-shan, Shensi).

Four males and four unsexed specimens were taken at Su-wa-tong (July).

Horeites brunnifrons umbraticus Stuart Baker

Bull. B. O. C., **44**, 1924, p. 63 (Schweli-Salween Divide, Yunnan).

A single male specimen comes from the mountains of Tung-la (To-la) (August).

Phylloscopus armandii (Milne-Edwards)

Abrornis armandii Milne-Edwards, Nouv. Arch. Mus. Paris, Bull., **1**, 1865, p. 22 (N. China).

Their large size and the brownish cast to the feathers of the head and back distinguish these birds from all others of the group.

A pair and two unsexed specimens come from Tao-mung-chung (April or May).

Phylloscopus subaffinis (Grant)

Oreopneuste subaffinis Grant, Bull. B. O. C., **10**, 1900, p. 37 (Pu-an-ting, S. W. Kweichu).

This series is as dark or darker below, and lighter above than *Phylloscopus armandii* (Milne-Edwards) without the brownish cast to the feathers of the back and head. It is distinctly smaller.

Rock has sent a pair, a female and two unsexed specimens from the mountains west of Wei-hsi (June) and two males and two unsexed specimens from Tao-mung-chung.

Phylloscopus fuscatus robustus Stresemann

Abh. Ber. Mus. Tierk. Volkerk. Dresden, **16**, 1924, p. 16 (Sungpan, Sechuan).

Three specimens have been sent, two unsexed specimens from Tao-mung-chung (April or May), and a female from the mountains west of Wei-hsi (June).

Phylloscopus maculipennis debilis (Thayer and Bangs)

Reguloides maculipennis debilis Thayer and Bangs, Mem. Mus. Comp. Zoöl., **40**, 1912, p. 180 (Kiating, Sechuan).

Single male specimens come from Tao-mung-chung (April or May), Shwe-men-kan (January) and a female from Mt. Satseto (February).

Phylloscopus reguloides davisoni (Oates)

Acanthopneuste davisoni Oates, Faun. Brit. Ind., **1**, 1889, p. 420 (Tenasserim).

I have followed Stuart Baker[1] in retaining the name *davisoni* in the belief that to change the name to *flavolivaceus* (Hume) would confuse matters unnecessarily. It is a question as to whether *flavolivaceus* (Hume) is really a synonym of *Phylloscopus reguloides reguloides* (Blyth) as Baker believes.[2]

Two unsexed specimens come from Su-wa-tong, Tibet, (July).

[1] Faun. Brit. Ind., **8**, 1930, p. 643.
[2] Faun. Brit. Ind., **7**, p. 189.

PHYLLOSCOPUS REGULOIDES CLAUDIAE (La Touche)

Acanthopneuste trochiloides claudiae La Touche, Bull. B. O. C., **43**, 1922, p. 22 (Mengtz, Yunnan).

Rock has sent nine males, a female and three unsexed specimens from Tao-mung-chung (April or May); four males and a female from Chou-yu-gko (April); a pair and two unsexed specimens from the mountains of Tung-la (To-la) (August); a male from Su-wa-tong, Tibet, (July), and an unsexed specimen from the Tse-chung mountains (August or September).

PHYLLOSCOPUS PROREGULUS FORRESTI Rothschild

Novit. Zoöl., **28**, 1921, p. 45 (Likiang Range, Yunnan).

Rock has sent four males, two females and an unsexed specimen from Tao-mung-chung (April or May), a pair and one unsexed specimen from Chou-yu-gko (April), and a female from the mountains of Tung-la (To-la) (August).

PHYLLOSCOPUS NITIDUS SATURATUS (Stuart Baker)

Acanthopneuste nitidus saturatus Stuart Baker, Bull. B. O. C., **44**, 1924, p. 62 (Daban, South Annam).

A male comes from Chou-yu-gko, a pair from Champutong (Chamutang) (July), and a male and two unsexed specimens from Su-wa-tong (July).

PHYLLOSCOPUS AFFINIS (Tickell)

Motacilla affinis Tickell, Journ. Asiat. Soc. Bengal, **2**, 1833, p. 576 (Borabhum).

These birds are much greener below than *Phylloscopus subaffinis* (Grant); they are smaller than *Phylloscopus armandii* (Milne-Edwards) and the under wing coverts are whiter than either of them.

One male and one unsexed specimen come from Tao-mung-chung (April or May).

PHYLLOSCOPUS MAGNIROSTRIS Blyth

Journ. Asiat. Soc. Bengal, **12**, 1843, p. 966 (Calcutta).

These specimens are darker on the head and back than *Phylloscopus l. borealis* (Blas.) but they appear to be but little more green below.

A male and an unsexed specimen were taken at Tao-mung-chung and two males and a female at Chou-yu-gko (April).

Phylloscopus pulcher vegetus (Bangs)

Reguloides pulcher vegetus Bangs, Proc. Biol. Soc. Wash., **26**, 1913, p. 95 (Chia-kim, West Sechuan).

A male was taken in the mountains of Tung-la (To-la) (August), a pair from Chou-yu-gko (April), and two females and two unsexed specimens from Su-wa-tong, Tibet, (July).

There is insufficient Indian material at hand for comparison. This series is very slightly darker and greener below than the type of *vegetus*.

Abroscopus schisticeps ripponi (Sharpe)

Cryptolopha ripponi Sharpe, Bull. B. O. C., **13**, 1902, p. 11 (Gyi-dzin-shan, Yunnan).

A pair was taken at Mt. Satseto in December, four unsexed specimens come from the mountains west of Wei-hsi (June) and a single unsexed bird from Tao-mung-chung, taken in April or May.

Seicurus burkii distinctus (La Touche)

Cryptolopha burkii distincta La Touche, Bull. B. O. C., **43**, 1922, p. 41 (Mongtz, Yunnan).

Two males, a female and an unsexed specimen come from the mountains west of Wei-hsi (June), two unsexed specimens from west of Wei-hsi (June), a pair from Chou-yu-gko, a male from Tao-mung-chung (April or May), an unsexed specimen from the mountains of Tse-chung (August or September), and an unsexed specimen from Su-wa-tong, Tibet, (July).

Outram Bangs has published a paper on the *burkii* form-circle[1] in which he has gone into the characters of this group very thoroughly. The *distinctus* group is smaller than *Seicurus b. valentini* (Hartert).

Seicurus burkii valentini (Hartert)

Cryptolopha burkii valentini Hartert, Vög. Pal. Faun., **1**, 1907, p. 497 (Tai-pai-shan).

A male from Tao-mung-chung (April or May) appears to be intermediate between *valentini* and *distinctus*. Although it is as large as *valentini*, it has the crown stripes blacker than typical specimens of that form, approaching more closely to *distinctus*.

Rock has sent two males from Tao-mung-chung and five males from Chou-yu-gko (April).

[1] Proc. N. E. Zoöl. Soc., **11**, 1929, pp. 1–5.

Homochlamys major (Hors. and Moore)

Cat. Birds Mus. E. Ind. Co., **1**, 1854, p. 323 (Nepal).

This species has been sent only from Su-wa-tong, Tibet, (July). The series consists of only three specimens, two males and one unsexed example.

Culicicapa ceylonensis antioxcentior Oberholser

Smithsonian Misc. Coll., **74**, July 1923, p. 69 (Tenasserim).

Culicicapa c. orientalis Stuart Baker, Bull. B. O. C., **44**, Nov. 1923, p. 12.

Five males and four unsexed specimens were taken at Tao-mung-chung in April or May, a single unsexed specimen at Wei-hsi in June, a female and an unsexed specimen at Chou-yu-gko in May, an unsexed specimen at the mountains of Tse-chung in August or September.

Chelidorhynx hypoxanthum (Blyth)

Rhipidura hypoxantha Blyth, Journ. Asiat. Soc. Bengal, **12**, 1843, p. 935 (Darjiling).

Rock took a single female at Chou-yu-gko in May, seven males, two females and four unsexed immature specimens at Su-wa-tong, Tibet, in July. He also secured a single unsexed specimen at the mountains of Tung-la (To-la) in August.

Eumyias thalassina thalassina (Swainson)

Muscicapa thalassina Swainson, Nat. Lib., **17** (Flycatchers), 1838, p. 252 (India).

Four males were taken at Tao-mung-chung (April or May), three females and an immature specimen west of Wei-hsi in June and an unsexed specimen in the mountains of Tse-chung in August or September.

Siphia strophiata strophiata Hodgson

Indian Rev., **1**, 1837, p. 651 (Nepal).

Two males come from Tao-mung-chung (April or May), four males and two females from Chou-yu-gko (May), a male and two females from Su-wa-tong, Tibet, (July) and a male, three females and seven immature specimens in the spotted plumage were taken at the mountains of Tung-la (To-la) in August.

Siphia parva albicella (Pallas)

Muscicapa albicella Pallas, Zoög. Russo-Asiat., **1**, 1827, p. 462 (Dauria).

A single specimen, a male, comes from Tao-mung-chung (April or May).

Muscicapula tricolor tricolor (Hodgson)

Digenea tricolor Hodgson, Proc. Zoöl. Soc. London, 1845, p. 26 (Nepal).

Two males and three females were taken at Chou-yu-gko in April and a female and two immature specimens at the mountains of Tung-la (To-la) in August.

Muscicapula saphira Blyth

Journ. Asiat. Soc. Bengal, **12**, 1843, p. 939 (Sikkim).

A single male specimen was taken west of Wei-hsi in June. Anderson recorded one male from Ponsee and Forrest sent two males to Rothschild. I cannot find that any more than these three birds have ever been taken in Yunnan.

Muscicapula hyperythra (Blyth)

Muscicapa hyperythra Blyth, Journ. Asiat. Soc. Bengal, **11**, 1842, p. 885 (India).

Three males were taken at Tao-mung-chung in April or May and a single female at Chou-yu-gko in April.

Muscicapula hodgsonii (Verreaux)

Siphia hodgsonii Verreaux, Nouv. Arch. Mus. Paris, Bull., **6**, 1871, p. 34 (Moupin).

Of a fine series of thirty-nine birds there are one male, two females and four immature birds from the mountains of Tung-la (To-la), taken in August, eight males and fifteen females from Chou-yu-gko (April), seven males and two females from Tao-mung-chung (April or May).

Muscicapula vivida oatesi (Salvadori)

Niltava oatesi Salvadori, Ann. Mus. Civ. Genova, **5**, 1887, p. 514 (Pegu).

Rock has sent a good series of three males from Tao-mung-chung (April or May), two males and five females from Chou-yu-gko (April),

and a female and five immature specimens, three of which appear to be males, from the mountains of Tung-la (To-la) in August.

Muscicapula superciliaris aestigma (Gray)

Muscicapa aestigma Gray, Cat. Mamm. Birds Nepal, 1846, pp. 90, 155 (Nepal).

Four males come from Tao-mung-chung (April or May).

Hemichelidon sibirica rothschildi Baker

Bull. B. O. C., **43**, 1923, p. 156 (Yunnan).

Rock obtained two males from Chou-yu-gko in May, a male, three females, an unsexed specimen and two immature birds in the spotty plumage from the mountains of Tung-la (To-la) in August.

Hemichelidon ferruginea Hodgson

Proc. Zoöl. Soc. London, 1845, p. 32 (Nepal).

Three males, a female and one unsexed specimen have been sent from Chou-yu-gko (April).

Niltava sundara denotata Bangs and Phillips

Bull. Mus. Comp. Zoöl., **58**, 1914, p. 280 (Mongtz, Yunnan).

Two males come from west of Wei-hsi (June) and Tao-mung-chung (April or May); a pair and an immature male and two females were taken at the mountains of Tung-la in August.

Niltava macgrigoriae (Burton)

Phoenicura macgrigoriae Burton, Proc. Zoöl. Soc. London, 1835, p. 152 (Himalayas).

A single specimen was taken at Champutong (Chamutang) in July.

Rhipidura albicollis albicollis (Vieillot)

Platyrhynchus albicollis Vieillot, Nouv. Dict. d'Hist. Nat., **27**, 1818, p. 13 (Bengal).

Rock has sent three males, two from the mountains of Tse-chung (August or September) and one from Mt. Satseto (December).

Pericrocotus brevirostris styani Baker

Bull. B. O. C., **40**, 1920, p. 117 (Sechuan).

Six males and five females come from Tao-mung-chung (April or May) and a male and two females from Chou-yu-gko (April) and a single female from the mountains of Tung-la (To-la) (August).

In his description Stuart Baker says that the males are not distinguishable from *affinis*. This series, however, is much lighter than spring birds from Loukouchai and Militi, south Yunnan, being strikingly lighter below. They resemble *brevirostris*. The females, however, are greener on the back and have much less yellow on the forehead than that form and are otherwise quite like the description of *styani*.

Lalage melaschista avensis Blyth

Cat. Birds Asiat. Mus., 1854, p. 327 (Arakan). (Described in Journ. Asiat. Soc. Bengal, **15**, 1846, p. 307.)

Two males come from Chou-yu-gko (April).

Microscelis leucocephalus leucocephalus (Gmelin)

Turdus leucocephalus Gmelin, Syst. Nat., **1**, 1789, p. 826 (China).

In a series of ten specimens, three males from Tao-mung-chung (April or May) one female west of Wei-hsi (June), one male from Champutong (July), and one male, two females and two immature specimens from the mountains of Tse-chung (August or September), there is not one referable to *Microsccelis l. concolor* Blyth. They are slightly larger, the males measure: wing 121 to 124 mm., as against 115 to 118 mm. for the male specimens of *concolor* in the Museum of Comparative Zoölogy. Furthermore none of them have the blue gray sheen to the feathers of the breast that is characteristic of *concolor*. There is a perfect intermediate specimen between *concolor* and *leucocephalus* in the series of the Museum of Comparative Zoölogy, which has the blue gray sheen on the breast as well as a pure white head and neck. Rock took *leucocephalus* in the Likiang Range in 1925.[1]

[1] Proc. U. S. Nat. Mus., **70**, 1926, p. 21.

Ixos mcclellandi similis (Rothschild)

Iole mcclellandi similis Rothschild, Novit. Zoöl., **28**, 1921, p. 51 (Schweli-Salween Divide).

Comparison of specimens of the same sex of *Ixos m. holti* (Swinh.) and *Ixos m. similis* (Roths.) taken in the same months in Fukien and Mongtz discloses that the south Yunnan bird has slightly yellower under tail coverts. Three specimens, a pair and a bird of the year just out of the nest, taken at Champutong in July by Rock, are much more clearly referable to *similis*, being lighter below and having the tail coverts much lighter yellow.

The bills of these three birds are larger than those of either *holti* or *similis*. This difference is noticeable also in the nestling when compared with a nestling in the collections of the Museum of Comparative Zoölogy, which was taken in August at Mongtz.

Spizixos canifrons canifrons Blyth

Journ. Asiat. Soc. Bengal, **14**, 1845, p. 571 (Cherra Punji).

There are no specimens of the Indian or Burmese bird at hand for comparison and therefore I cannot say whether this bird has a gray or a brown throat. In a long series from south Yunnan and Sechuan in the Museum of Comparative Zoölogy the throats of the mature birds are gray, or perhaps brownish gray by a slight stretch of the imagination. None are dark brownish gray as described by Stuart Baker and so figured.[1]

Since Rothschild[2] considers that the character of the greenness or yellowness of the underparts is due to age or individual difference and my own comparison of the Chinese specimens in the Museum of Comparative Zoölogy has led me to the same conclusion, I follow him in considering the Yunnan bird identical with the Indian and Burmese.

Three birds, two males and a female come from the Likiang Mountains and were taken in February. A fourth is apparently an immature female and was taken in the same place in December. This specimen is much darker below than the others.

[1] Faun. Brit. Ind., **1**, p. 400.
[2] Novit. Zoöl., **28**, 1921, p. 50.

Pycnonotus aurigaster xanthorhous Anderson

Proc. Asiat. Soc. Bengal, 1869, p. 265 (Kakhyen Hills).

A single male specimen was taken at Tao-mung-chung in April or May.

Lanius tephronotus (Vigors)

Collurio tephronotus Vigors, Proc. Zoöl. Soc. London, 1831, p. 43 (Himalayas).

Five males and three females were taken at Tao-mung-chung in April or May and three males at Chou-yu-gko in May.

Conostoma aemodium aemodium Hodgson

Journ. Asiat. Soc. Bengal, **10**, 1841, p. 857 (Nepal).

There is a good deal of individual variation in the measurement of the wings of this series, the males measuring 121–136 and the females 118–134. There is, of course, a good deal of doubt about the sexing done by the native collectors that Rock employs, but the females seem to be slightly smaller than the males.

Three males and two females were taken at Tao-mung-chung (April or May); three males and a single female at Chou-yu-gko (April); three males and one unsexed specimen at Mt. Satseto (December); and two pairs at Shwe-men-kan (February).

Paradoxornis guttaticollis David

Nouv. Arch. Mus. Paris, Bull., **7**, 1871, p. 14 (W. Sechuan).

Only two females, one from Tao-mung-chung and the other from Chou-yu-gko, are in this series.

Suthora unicolor canaster Thayer and Bangs

Mem. Mus. Comp. Zoöl., **40**, 1912, p. 117 (Washan, Sechuan).

Four males, six females and two unsexed specimens come from Mt. Gyi-na-loko (October or November), a single female from Champutong (Chamutang) (April), two females and an unsexed specimen from Shwe-men-kan (January) and a pair from Yung-ning (February).

Suthora fulvifrons cyanophrys David

Journ. Trois Voy. Chine, **1**, 1875, p. 345 (Shensi meridional).

Four males, three females and four unsexed specimens come from Tao-mung-chung, two males and three unsexed specimens from Chou-yu-gko, and six males, five females and five unsexed specimens from Mt. Satseto.

Suthora webbiana ricketti (Rothschild)

Paradoxornis webbiana ricketti Rothschild, Bull. B. O. C., **43**, 1922, p. 11 (Yangtze Valley, Yunnan).

Three males and a single female come from Mt. Satseto (December).

Suthora webbiana brunnea Anderson

Proc. Zoöl. Soc. London, 1871, p. 211 (Western Yunnan).

I have followed Stuart Baker [1] in recording this bird as a subspecies of *webbiana*. Although Rothschild records [2] it as a distinct species, there seems to be no evidence that the two birds have been found breeding in the same locality.

Five adult specimens in the present series are lighter below than a single specimen of *brunnea* from Burma that I have for comparison. They are, however, in worn plumage while the single specimen in the collection of the Museum of Comparative Zoölogy is old and probably has darkened with time.

Three males, a female and three immature specimens come from west of Wei-hsi and east of the Mekong River (June) and a single female comes from Champutong (Chamutang) (July).

The violet color of the throat in the immature specimens is somewhat lighter.

Regulus regulus yunnanensis Rippon

Bull. B. O. C., **19**, 1906, p. 19 (W. Yunnan).

A male, three females and three unsexed specimens come from Mt. Satseto (February).

[1] Faun. Brit. Ind., **7**, 1930, p. 21.
[2] Novit. Zoöl., **33**, 1926, p. 310.

Aegithaliscus bonvaloti bonvaloti (Oustalet)

Acredula bonvaloti Oust., Ann. Sci. Nat. Zoöl., **12**, 1891, p. 286 (Ta-tsien-lu).

Seven males and three females come from Tao-mung-chung (April or May), two males and one female from Chou-yu-gko (April), four males and one female from Mt. Satseto (February), and single males from west of Wei-hsi (June), mountains of Tung-la (To-la) (August) and Mt. Gyi-na-loko (October or November).

Aegithaliscus concinnus talifuensis Rippon

Bull. B. O. C., **14**, 1903, p. 18 (Gyi-dzin-shan, N. Shan States).

Two males were taken at Tao-mung-chung in April or May, and a male, two females and two immature specimens from west of Wei-hsi in June.

Stuart Baker remarks [1] that this form is very doubtfully distinct from *Aegithaliscus c. concinnus* (Gould) from China and Yunnan. I find that in comparison with ten specimens taken in the spring in eastern China (Fukien and Sechuan), the Yunnan birds have the buffy brown of the pectoral band and the head a little darker. Birds from Mongtz in southern Yunnan seem to be identical with those from N. W. Yunnan.

Sylviparus modestus saturatior Rippon

Bull. B. O. C., **16**, 1900, p. 87 (Mt. Victoria, Chin Hills).

Three males and two females come from Tao-mung-chung (April or May), a male from Su-wa-tong, Tibet, taken in July and an unsexed specimen from the mountains of Tung-la (To-la) (August), and two males and a female from Mt. Satseto (December).

Parus dichrous wellsi Baker

Bull. B. O. C., **38**, 1917, p. 8 (Yangtze Big Bend).

Six males and a female were taken at Chou-yu-gko in April; a single male at Tao-mung-chung in April or May; two unsexed specimens at Su-wa-tong, Tibet, in July; two males and an unsexed specimen at the mountains of Tung-la (To-la) in August; a male at Mt. Gyi-na-loko in October or November, an unsexed specimen at Mt. Satseto in Decem-

[1] Faun. Brit. Ind., 1, 1922, p. 95.

ber; eight males, two females and four unsexed specimens at Shwe-men-kan in January and three males and a female at Mt. Satseto in February.

Parus rufonuchalis beavani (Jerdon)

Lophophanes beavani Jerdon, Birds of India, **2**, 1863, p. 275, ex. Blyth MS. (Mt. Teringloo, Sikkim).

Two males and a female were taken at Chou-yu-gko in April; a single male at Su-wa-tong, Tibet, in July; a male and four females at Mt. Gyi-na-loko in October or November; two males, four females and two unsexed specimens from Shwe-men-kan in January and a single male from the east slopes of the Likiang Snow Range in February.

Parus ater aemodius Blyth

Journ. Asiat. Soc. Bengal, **13**, 1844, p. 943 (Nepal).

A single male comes from Tao-mung-chung (April or May), a male, three females and an unsexed specimen from Chou-yu-gko (April); an immature specimen comes from west of Wei-hsi in June. A single male from Mt. Satseto, taken in February has a wing measurement of 64 mm. It differs in no other way from the spring specimens and I have concluded that it is simply an abnormally large specimen.

Parus monticolus yunnanensis La Touche

Bull. B. O. C., **42**, 1921, p. 51 (S. E. Yunnan).

Four males and a female were taken at Tao-mung-chung in April or May; three males and two females at Chou-yu-gko in April; a single unsexed specimen at Su-wa-tong, Tibet, in July; and a male and three unsexed specimens in the mountains of Tung-la (To-la) in August.

These specimens have the underparts very slightly greener than six specimens of the Indian bird in the Museum of Comparative Zoölogy. I can find no other difference.

Parus palustris dejeani Oustalet

Bull. Mus. Hist. Nat. Paris, **3**, 1897, p. 209 (Ta-tsien-lu).

Two males come from Tao-mung-chung, a single female from Chou-yu-gko (April) and a single male from the Likiang Snow Range (February).

Parus major altarum La Touche

Bull. B. O. C., **42**, 1922, p. 53 (Yunnan).

Two specimens, one a female (sexing?) from the Likiang Snow Range (February) and one unsexed specimen from west of Wei-hsi (June) have been sent.

Cephalopyrus flammiceps olivaceus Rothschild

Novit. Zoöl., **30**, 1923, p. 263 (Vicinity of Tengueh).

Three males were taken at Tao-mung-chung in April or May.

Sitta yunnanensis Grant

Bull. B. O. C., **10**, 1900, p. 37 (Wei-Yuan).

Two unsexed examples come from west of Wei-hsi (June), a male from the Likiang Range (February) and a male from Mt. Gyi-na-loko (October or November).

Sitta europaea nebulosa La Touche

Bull. B. O. C., **42**, 1921, p. 30 (S. E. Yunnan).

Rock has sent a fine series. Five males and a female come from Tao-mung-chung (April or May); three males from Chou-yu-gko (April), two males, a female and two unsexed specimens from the mountains of Tung-la (To-la) (August); a single male from the mountains of Tse-chung (August or September); three unsexed specimens from Su-wa-tong, Tibet, (July), a male, a female and an unsexed specimen from Mt. Gyi-na-loko (October or November); three males and a female from Mt. Satseto in February and a pair from the east slopes of Mt. Satseto in March.

The type of *nebulosa* which is in the Museum of Comparative Zoölogy was taken in southern Yunnan (Milati) in February and is very gray below as are all the winter birds in the collections of the Museum of Comparative Zoölogy and the specimens in the series that Rock has just sent. Spring and summer birds are much lighter and browner, less gray.

Tichodroma muraria (Linnaeus)

Certhia muraria Linn., Syst. Nat. edit. 12, **1**, 1766, p. 184 (South Europe).

A single male comes from Mt. Gyi-na-loko (October or November).

Certhia himalayana yunnanensis Sharpe

Bull. B. O. C., **13**, 1902, p. 11 (Yunnan).

Two males, two females and an unsexed specimen come from Tao-mung-chung (April or May), a male from the mountains of Tung-la (To-la) (July), a single female from Mt. Gyi-na-loko (December) and a pair and an unsexed specimen from Mt. Satseto (February).

Certhia familiaris khamensis Bianchi

Bianchi in Sharpe's Hand List of B., **4**, 1893, pp. 355, 360 (Kham).

A male comes from the mountains of Tung-la (To-la) (August), an unsexed immature bird from Su-wa-tong, Tibet, (July), two males and an unsexed specimen from Mt. Gyi-na-loko (October or November) and a male from the eastern slopes of the Likiang Snow Range (February).

Zosterops simplex simplex Swinhoe

Proc. Zoöl. Soc. London, 1862, p. 317 (S. E. China).

A male, seven females and five unsexed specimens were taken at the mountains west of Wei-hsi in June and a single unsexed example at Su-wa-tong, Tibet, in July.

Pachyglossa melanoxantha Hodgson

Journ. Asiat Soc. Bengal, **12**, 1843, p. 1010 (Nepal).

A male and two females were taken at Chou-yu-gko in April.

Aethopygia ignicauda exultans Baker

Bull. B. O. C., **46**, 1925, p. 13 (Schweli-Salween Divide, w. central Yunnan).

A series of twelve males, an unsexed specimen (young male) and six females were shot at Su-wa-tong, Tibet, in July.

Aethopygia dabryi (Verreaux)

Nectarinia dabryi Verreaux, Rev. et Mag. Zoöl., 1867, p. 173 (Ta-tsien-lu, Sechuan).

Eight males and five females were taken at Tao-mung-chung in April or May. Five pairs were taken at Chou-yu-gko in April, a pair

at Champutong (Chamutang) in July and a single male at Wei-hsi in June; a young bird just out of the nest was taken at Su-wa-tong, Tibet, in July.

Motacilla alboides Hodgson

Asiat. Res., **19**, 1836, p. 191 (Nepal).

Rock has sent three males and two females from Tao-mung-chung (April or May). I have followed Stuart-Baker in considering all forms of the black backed group as distinct species.

Motacilla leucopsis Gould

Proc. Zoöl. Soc., London, 1837, p. 78 (India).

A single specimen comes from Tao-mung-chung (April or May). It is a male.

Motacilla cinerea caspica (Gmelin)

Parus caspicus Gmelin, Reise Russ. Reichs., **3**, 1774, p. 104, pl. 20, fig. 2 (Caspian Sea).

A single male specimen was sent from Tao-mung-chung (April or May). It is just beginning to molt out of winter plumage.

Anthus hodgsoni yunnanensis Uchida and Kuroda

Annot. Zoöl. Japan, **9**, 1916, p. 134 (Yunnan).

Four males and three females were taken at Chou-yu-gko in May and two males at Mt. Gyi-na-loko in October or November. The autumn birds are very much darker. The back is green not grayish green and the yellow of the throat is darker and more buffy.

Anthus roseatus Blyth

Journ. Asiat. Soc. Bengal, **16**, 1847, p. 437 (Nepal).

Rock took two pairs at Tao-mung-chung in April or May.

Alauda gulgula weigoldi Hartert

Abh. u. Ber. d. Zoöl. Anthr. Ethn. Mus. zu Dresden, **15**, 1922, no. 3, p. 20 (Hankow).

A male, a female and an unsexed specimen were taken at Tao-mung-chung in April or May. Their wings measure 101, 101 and 106

. . . the extreme of size given for *weigoldi*. I can find very little difference in size between the short-winged larks of south and north China.

I prefer to follow Stuart Baker in retaining *gulgula* for the short-winged birds.

Emberiza pusilla Pallas

Reise Russ. Reichs., **3**, 1776, p. 697 (Daurian Alps).

Six males, a female and one unsexed specimen come from Tao-mung-chung (April or May).

Emberiza fucata arcuata Sharpe

Cat. Birds Brit. Mus., **12**, 1888, p. 494 (Himalayas).

A pair was taken in the mountains west of Wei-hsi in June. They are in worn breeding plumage. They are as dark as a cotype of *Emberiza f. kuatunensis* La Touche (taken in April), but the chestnut borders of the feathers of the median coverts and the lesser coverts are worn and faded so that the appearance of the bird is somewhat changed.

Emberiza spodocephala melanops Blyth

Journ. Asiat. Soc. Bengal, **14**, 1845, p. 554 (Tippera).

Four males and a female (sexing?) were taken west of Wei-hsi in June.

The breeding range that Sushkin has given [1] for this bird should be extended to include Yunnan. In spite of the fact that there is no direct evidence that these birds were breeding in western Yunnan, it is very probable that they were, since they were taken there in June. For this reason it may not be that all birds breeding west of Sechuan are *Emberiza s. spodocephala* (Pallas).

Emberiza elegans elegantula Swinhoe

Proc. Zoöl. Soc. London, 1870, p. 134 (Kweichow, Hupeh).

Eleven males and three females (young males?) were taken at Tao-mung-chung in April or May, two pairs and four immature specimens (unsexed) from west of Wei-hsi in June; a single male comes

[1] Proc. Soc. Nat. Hist., Boston, **38**, 1925, p. 28.

from the Likiang Snow Range in March and a single immature specimen from Champutong in July.

A single nestling specimen of what appears to be this form was taken at Su-wa-tong, Tibet, in August.

Emberiza aureola Pallas

Reise Russ. Reichs., **2**, 1773, p. 711 (Irtysh).

Two males and two unsexed specimens (females?) were taken at Tao-mung-chung in April or May.

Emberiza godlewskii yunnanensis Sharpe

Bull. B. O. C., **13**, 1902, p. 12 (Talifu, Yunnan).

Three males come from Tao-mung-chung (April or May); two males from Chou-yu-gko (May) and three males and an unsexed specimen from Mt. Satseto (February).

I have followed Sushkin in his treatment of this group. From a comparison of the specimens in the Museum of Comparative Zoölogy it would appear that he is right in considering the *cia* group, characterized by a black stripe behind the ear coverts, and the *godlewskii* group with the comparatively broad chestnut stripe, as distinct species.

Passer rutilans intensior Rothschild

Bull. B. O. C., **43**, 1922, p. 11 (Mekong Valley).

Two pairs were taken west of Wei-hsi in June; two males at Tao-mung-chung in April or May, and single females at Champutong in July and at Mt. Satseto in December.

Fringilla montifringilla Linnaeus

Syst. Nat., 10th Ed., **1**, 1759, p. 179 (Sweden).

Two females were taken at Mt. Satseto in October or November, and two females and an unsexed specimen at Tao-mung-chung in April or May.

Procarduelis nipalensis intensicolor Baker

Bull. B. O. C., **45**, 1925, p. 92 (Yunnan).

Three males come from Mt. Gyi-na-loko (October or November),

three pairs from Mt. Satseto (December and February), and eleven females from Su-wa-tong, Tibet, (July).

Procarduelis rubescens saturatior Rothschild

Bull. B. O. C., **43**, 1922, p. 12 (Likiang Range, Yunnan).

Five males and five females come from Shwe-men-kan (January), a male from Mt. Satseto (January), a male from Mt. Gyi-na-loko (October or November) and a male from Mt. Satseto (January).

Propyrrhula subhimachala intensior Rothschild

Bull. B. O. C., **43**, 1922, p. 12 (Likiang Range).

A single specimen, male, was taken at Mt. Gyi-na-loko in November or December.

Erythrina thura feminina (Rippon)

Carpodacus femininus Rippon, Bull. B. O. C., **19**, 1906, p. 31 (Western Yunnan).

Rock has sent a fine series of thirty-seven skins. Three males and ten females were taken at Mt. Gyi-na-loko in November and December; five males and eleven females at Shwe-men-kan in January and two males and five females on the east slopes of the Likiang Snow Range near Mt. Satseto in January or February and a single female from the mountains of Tung-la (To-la) in July.

Females from the same locality have the rump a very deep reddish brown or a rather lighter brown. This seems to me to be an individual variation.

Erythrina verreauxi (Dav. and Oust.)

Propasser verreauxi Dav. and Oust., Ois. de la Chine, 1877, p. 355 (China).

A pair was taken at Mt. Gyi-na-loko in October or November; three males and two females at Mt. Satseto in December and a male and two females in February; single females come from Shwe-men-kan (January), Su-wa-tong, Tibet, (July), and the mountains of Tung-la (To-la) (August).

I have followed Berlioz in relegating the name *Erythrina ripponi* (Sharpe) to synonymy.

Erythrina pulcherrima argophrys (Berlioz)

Carpodacus argophrys Berlioz, Bull. Mus. Paris, ser. 2, **1**, 1929, p. 131 (Ta-tsien-lu and Tseku, Sechuan).

A pair was taken on the Likiang Range in February; single females on the slopes of Mt. Gyi-na-loko in October or November, Mt. Satseto in March and Tao-mung-chung in April or May.

I have followed Stresemann [1] in the identification of the *pulcherrima* group. He has apparently examined most of the known material in Europe.

Erythrina eos Stresemann

Orn. Monats., **38**, 1930, p. 75 (Sungpan, Sechuan).

A single specimen was taken in the mountains of Tung-la (To-la) in August.

The wing tip of this specimen measures 12 mm. and the wing measures 74 mm., as against 24 mm. and 87 mm. for the specimens that I have identified as *Erythrina pulcherrima argophrys* Berlioz.

Erythrina edwardsii rubicunda subsp. nov.

Type.—M. C. Z. No. 159,303, taken at Su-Wa-Tong, Tibet, on the upper slopes of the Mt. Kenichunpo or Gomba-La, east slopes of the Salween-Irawaddy Divide, 14,000 ft.

Closest to *Erythrina edwardsii saturatus* (Blanford) but the head is maroon rather than pink with greenish reflections; edges of the feathers of the back are reddish brown, without the hint of green; the throat is a more purplish red and the breast is maroon only very slightly lighter than the head; the belly is pink but without any yellowish tinge. The effect is such that the bird is noticeably darker and redder than the Indian Bird. The female also is much darker above, the dark shafts of the feathers being so close together that it appears almost to be black. Below, the shafts of the feathers are black rather than dark brown and the edges of the feathers are a darker brown.

Description.— Head maroon; a broad light pink stripe running from just above and before the eye to the neck; lores dark brown; ear coverts maroon like the head; feathers of the back with a broad black shaft stripe, the edges reddish brown; tail coverts maroon like the head; tail

[1] Orn. Monats., **38**, 1930, p. 72.

feathers dull brown, the outer webs of the outer three narrowly edged with reddish brown. Below, brown; throat and breast purplish red with black shaft lines to the feathers; belly rose pink; thighs have a brownish tinge, giving a bronze effect; primary coverts brown, the outer webs narrowly edged with reddish bronze and tipped with pink; primaries and secondaries brown, the outer webs narrowly edged with reddish bronze.

Rothschild [1] remarked as follows on a specimen of *Erythrina edwardsii saturatus* (Blanf.) from Yunnan: "The adult male is much darker than any of my Chinese birds, and is even darker than any specimen from Nepal and Sikkim that I possess, so it may prove to be a third race when more Yunnan material comes to hand."

Rock has sent a series of four males and eight females from Su-wa-tong, Tibet, taken in July and a series of one male and eight females taken in the Likiang Snow Range in the vicinity of Mt. Satseto at altitudes varying from 9,000 to 14,000 ft. in October, November, December, January, February.

Erythrina vinacea rubidior subsp. nov.

Type No. 159,258 Museum Comparative Zoölogy from the mountains of Tung-la (To-la).

This bird is like *Erythrina v. vinacea* (Verreaux) but darker. The deeper, almost blackish, red is more noticeable on the upper breast. The female is markedly darker than females from Sechuan.

Rock has sent a pair from the mountains of Tung-la (To-la) taken in July, a female from Su-wa-tong, taken in August and a male from Mt. Gyi-na-loko, taken in October or November.

These specimens have been compared with three males and two females from Sechuan in the collections of the Museum of Comparative Zoölogy, one male from the La Touche collection without data other than the locality "Sechuan," a male from Washan, Sechuan, (May), and another from Chetze, Hupeh, (December); both females are from Washan.

If the type locality of *Erythrina v. vinacea* (Verr.) is really "Mountains of Chinese Tibet" as Hartert and Rothschild have recorded it, it would seem very improbable that we should now find a race on the border of Tibet and Yunnan. I think, however, that the type locality is actually Ho-pa-tchang, "a journey of a day and a half

[1] Novit. Zoöl., **33**, 1926, p. 332.

north of Chengtu, Sechuan," and that David shot his birds in that district only.[1] I believe that birds from Kansu, Yunnan and eastern Tibet are geographical representatives, a western race of *vinacea*.

Carpodacus erythrina roseatus (Blyth)

Propasser roseatus Blyth, (ex Tickell) Journ. Asiat. Soc. Bengal, **11**, 1842, p. 401 (Calcutta).

Two males and a female come from Tao-mung-chung (April or May).

Pyrrhula erythaca altera Rippon

Bull. B. O. C., **19**, 1906, p. 19 (West Yunnan).

Rock has sent a fine series of thirty-one skins. A male and six females come from Tao-mung-chung (April or May); single females were taken at Chou-yu-gko (May) and the mountains of Tung-la (To-la) in August; four males and fourteen females come from Mt. Satseto (January or February). Two males and three females from Mt. Gyi-na-loko (October or November).

The throat of one of the males taken at Mt. Satseto is suffused with red and another has the breast quite green with only a few inconspicuous reddish-orange feathers. None of these specimens have the breast vermilion as has a single topotype of *Pyrrhula e. taipaishanensis* Roths. in the collections of the Museum of Comparative Zoölogy. There are specimens from Sechuan, apparently immature, taken in September in the La Touche collection which have the breast suffused with greenish-yellow as the single specimen that Rock has sent. I am, therefore, inclined to believe that this coloration is due to age or perhaps to the character of the food or to a combination of both.

Pyrrhula nipalensis ricketti La Touche

Bull. B. O. C., **16**, 1905, p. 21 (Mountains of N. W. Fukien).

A male and two females were taken in the mountains of Tung-la (To-la) and a single female in the mountains of Tse-chung, all in August.

[1] Nouv. Arch. Mus. Paris, Bull., **7**, 1871, p. 61; *ibid*, **8**, 1873, pp. 22–26.

Pyrrhoplectes epauletta (Hodgson)

Pyrrhula epauletta Hodgs., Asiat. Res., **19**, 1836, p. 156 (N. and C. Nepal).

Twelve males and four females come from Su-wa-tong, Tibet, (July). These birds appear to be identical with the specimens from the Himalayas in the Museum of Comparative Zoölogy.

Spinus thibetanus (Hume)

Chrysomitris thibetanus Hume, Ibis, 1872, p. 107 (Sikkim).

A pair was taken at Mt. Gyi-na-loko in October or November. I cannot find that this bird has ever been taken in Yunnan before.

Hypacanthis ambiguus (Oustalet)

Chrysomitris ambigua Oustalet, Bull. Mus. Paris, **2**, 1896, p. 186 (Yunnan).

Two females come from Tao-mung-chung (April or May) and four males, a single female from Mt. Satseto (February) and an immature specimen from Champutong (July).

The differences in color pattern between this bird and *Hypocanthis s. spinoides* (Vigors) are so great that I prefer to consider them as distinct species.

Perissospiza icteroides affinis (Blyth)

Hesperiphona affinis Blyth, Journ. Asiat. Soc. Bengal, **24**, 1855, p. 179 (Alpine Punjab).

Rock has sent a series of nine birds. A male was taken at Tao-mung-chung in April or May and one on the mountains of Tung-la in August; four males and two females at Mt. Gyi-na-loko in October or November and a single female at Shwe-men-kan in January.

Perissospiza carnipes carnipes (Hodgson)

Coccothraustes carnipes Hodgson, Asiat. Res., **19**, 1836, p. 151 (Nepal).

A mature and two immature males and a female were taken at Chou-yu-gko in May; a pair at the mountains of Tung-la (To-la) in August and three females on Mt. Satseto in February.

Mycerobas melanoxanthos (Hodgson)

Coccothraustes melanoxanthos Hodgson, Asiat. Res., **19**, 1836, p. 150 (Nepal).

A single specimen, which the collector could not sex, but which appears to be a female comes from the mountains of Tung-la (To-la) (August).

Oriolus chinensis tenuirostris Blyth

Journ. Asiat. Soc. Bengal, **15**, 1846, p. 48 (Central India).

Three males and two females come from west of Wei-hsi (June), a single male from Tao-mung-chung (April or May) and a single female from the Likiang Snow Range (March).

Oriolus trailli (Vigors)

Pastor trailli Vigors, Proc. Zoöl. Soc. London, 1831, p. 175 (Darjiling).

A mature, an immature male and a female were taken at Chou-yu-gko in April.

Dicrurus macrocercus cathoecus Swinhoe

Proc. Zoöl. Soc. London, 1871, p. 377 (China).

A single specimen, a male, was shot at Tao-mung-chung in April or May.

Dicrurus leucophaeus hopwoodi Baker

Novit. Zoöl., **25**, 1918, p. 294 (Decca).

Five males and two females were taken at Tao-mung-chung in April or May and a single female west of Wei-hsi in June.

Acridotheres cristatellus cristatellus (Gmelin)

Gracula cristatella Gmelin, Syst. Nat., **1**, 1788, p. 397 (China).

A single male was taken in the Likiang Snow Range in February.

Garrulus glandarius sinensis Swinhoe

Proc. Zoöl. Soc. London, 1871, p. 381 (South China, westwards to Sechuan).

Five females (sexing ?): three were taken at Mt. Gyi-na-loko in October or November, one at Mt. Satseto in December and one at Shwe-men-kan in January.

NUCIFRAGA CARYOCATACTES MACELLA Thayer and Bangs

Bull. Mus. Comp. Zoöl., **52**, 1909, p. 140 (Hsien-shan-hsien).

Three males and a female taken at Chou-yu-gko in April are immature, another female taken at the same place at the same time is in worn plumage and the feathers of the head and back and breast have almost lost their white tips and the brown is faded. A female taken at Tao-mung-chung in April or May is in fresher plumage and a female from Champutong, taken in July is in full plumage and is very dark as are two females that were taken at Mt. Gyi-na-loko in October or November.

I cannot find that these birds differ from *macella* in any important characteristic and I believe that *Nucifraga c. yunnanensis* Ingram [1] is probably a synonym.

[1] Bull. B. O. C., **25**, 1910, p. 86.